

Hist.
RA655
824M



John G. W. Shaw.

YALE
MEDICAL LIBRARY



HISTORICAL
LIBRARY
The Harvey Cushing Fund

10/18

B₂

SM/14

~~11/10~~

12/24

Digitized by the Internet Archive
in 2011 with funding from
Open Knowledge Commons and Yale University, Cushing/Whitney Medical Library

QUARTERLY REVIEW

1871-1872

PROFESSOR OF THE HISTORY OF THE UNITED STATES

OF THE UNIVERSITY OF CHICAGO
AND
OF THE UNIVERSITY OF CALIFORNIA

CHICAGO: PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

1871-1872
VOLUME I
NUMBER I
JANUARY, 1872

THE UNIVERSITY OF CHICAGO PRESS
PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

CHICAGO: PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

CHICAGO: PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

CHICAGO: PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

CHICAGO: PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS

EVILS
OF
QUARANTINE LAWS,
AND
NON-EXISTENCE
OF
PESTILENTIAL CONTAGION;

DEDUCED FROM
THE PHÆNOMENA OF THE PLAGUE OF THE LEVANT,
THE YELLOW FEVER OF SPAIN, AND THE
CHOLERA MORBUS OF ASIA.

BY
CHARLES MACLEAN, M.D.

"A froward retention of custom is as turbulent a thing as an innovation ; and they that reverence too much old times are but a scorn to the new."—BACON.

"The history of Physic presents numerous instances of recorded facts, which, after having obtained credit at certain periods of time, have, by subsequent investigation and inquiry, fallen into disrepute, or have been disproved."—REPORT OF THE COLLEGE OF PHYSICIANS TO THE PRIVY COUNCIL, 15th Nov. 1815.

"For Oh ! it most imports you, 'tis your all,
To keep your trade entire."—THOMSON.

LONDON:

PRINTED FOR T. AND G. UNDERWOOD, 32 FLEET STREET ; CALLOW
AND WILSON, PRINCES STREET ; BURGESS AND HILL, WINDMILL
STREET ; ANDERSON, SMITHFIELD ; COX AND SON, BOROUGH ;
E. WILSON, ROYAL EXCHANGE : A. BLACK, EDINBURGH : WARDLAW
AND CUNNINGHAM, GLASGOW : HODGES AND MACARTHUR, DUBLIN :
AND CAREY AND LEA, PHILADELPHIA.

1824.

PRINTED BY RICHARD TAYLOR,
SHOE LANE.

TO
WILLIAM MACLURE, ESQ.
OF PHILADELPHIA.

MY DEAR SIR,

A GRATEFUL recollection of the pleasant and instructive hours, which I was so fortunate as to pass in your converse at Madrid, when, abstracted from the avocations of a pursuit beset with jealousy, embarrassed by prejudice, and obstructed by intrigue, I found myself as it were suddenly transported into a region (small indeed, but choice) of freedom, sincerity, and friendship, naturally renders me desirous to mark the circumstances, by inscribing to you the fruits of my researches upon that occasion. It will be gratifying to me to be known, wherever these pages are read, as being deemed not unworthy the regard of a man who devotes the energies of a superior mind, the influence of an ample fortune, and by far the greatest portion of his time, to the establishing of means of conferring the greatest sum of knowledge, in the shortest space of time, and consequently the greatest sum of happiness, prosperity, and power, on the rising generation of his countrymen. I have

also a further reason for now addressing you : It is to request, that upon your return to the United States you would use means to induce the local legislatures, to whose province I understand all such matters belong, to take the subject of sanitary laws into their most earnest consideration. The examination of the materials which you have it in your power to present to them,—even of the contents of this volume,—I feel assured would be sufficient to convince them of the propriety of forthwith repealing every vestige of a Code unparalleled, perhaps, for absurdity and mischief.

I remain, my dear Sir,

Your faithful and most obedient servant,

CHARLES MACLEAN.

London, May 4, 1824.

P R E F A C E.

“ Truths that the theorist could never reach,
And observation taught me, I would teach.”

COWPER.

THE immensity of the change which has taken place in the practice of physic, especially in respect to acute maladies, during the last thirty-five years, can only be duly estimated by comparing the manner, extent, and degree, in which mercury and other exciting powers are now applied upon general principles, with the manner, extent and degree, in which they had until then been employed, hypothetically or at random, in the treatment of diseases. Previous to that period, it would have been accounted madness to have proposed the use of mercury in any shape, in yellow fever, typhus, plague, cholera morbus, diarrhœa, dysentery or scurvy, &c. It was then only administered *as a specific* in particular diseases; or occasionally as a purgative, diuretic, sialogogue, or sudorific. It has since, however, become the fashion to employ it in almost every disease: and a late Fellow

of the College of Physicians has feelingly complained, that it had become domiciliated even in the nurseries*. But, whilst necessity, or a regard to individual reputation, has prompted to the common imitation of the practice of prescribing mercury in acute diseases, in so far as the mere *name* of the remedy is concerned ; it is to be deplored that the general principles, upon which alone it can effect cures safely, quickly, and pleasantly (the *tuto, celeriter, et jucunde* of Asclepiades), should appear to be yet even imperfectly understood, but by the few ; and that they should continue to be resisted, upon purely hypothetical or assumed grounds, and without the form of a trial, by the many. The unscientific application of this powerful agent, whilst its employment is freely extended, is a considerable abstraction from its value.

No circumstances, perhaps, could have occurred, to illustrate the actual state of the medical mind upon this subject, among particular classes of the Faculty in England, more clearly than has been done by those which happened last year at the Millbank General Penitentiary, as officially exhibited in the Report of a Select Committee of the House of

* Observations on the Hepatitis of India, and on the prevalent Use of Mercury in the Diseases of that Country. By W. Saunders, M.D. &c. p. 20.

Commons, on the epidemic of that establishment, dated the 8th of July 1823. From that Report it appears, that the epidemic of the Penitentiary manifested the symptoms proper to diarrhœa and dysentery, as well as those proper to scurvy; that Doctors Roget and Latham, who had been appointed, under peculiar circumstances, to attend the sick of that prison, finding the treatment usually recommended in such diseases unavailing, resorted, upon general principles, to the use of mercury; and that mercury so administered proved to be an efficient remedy. But considerable differences of opinion, respecting the propriety of this mode of treatment, prevailed among the members of the Faculty, who were examined, and disapprobation was manifested by several of them. When by all the rules of the schools men ought to die, it is scarcely decorous to preserve them by contrary ones. Certainly it was not according to the maxims of assumptive medicine, that an agent whose unscientific application is followed by purging, should, when scientifically applied, be capable of curing a disease of which purging is a symptom; or that an agent whose unscientific application is followed by ulcerated gums, should, when scientifically applied, be capable of curing a disease, of which ulcerated gums are a symptom; although such unscholastic phænomena

are perfectly conformable to the principles of inductive medicine. The following explanation was given to the Committee by Dr. Latham, for himself and Dr. Roget, of the grounds upon which they prescribed. "Have you any observations to make upon what has been said? One word only : After the hinting and hesitating and disapproving that have proceeded from our learned brethren for so many days past, we think it but right that we should state our unanimous conviction upon this matter; and the unanimous conviction of my colleague and myself is, that if we had not treated this disease *upon general principles*, and that if, *in particular*, we had not pushed that one remedy of mercury to the full extent to which we have pushed it, every one of the individuals who have been affected with dysentery, in the Penitentiary, would have inevitably perished. We have stated it as the result of our observation, that there are certain dysenteries (and the dysentery of the Penitentiary is one of them) which are *as certainly controlled by mercury, as that disease is certainly controlled by it, for which mercury is a reputed specific*; that the symptoms of this disease will as certainly disappear, or are abated, when the mouth becomes affected, as venereal sores disappear or amend under the same circumstances: and this is what we have witnessed, with a very

few exceptions, in the Penitentiary. Further, I would state *this is no new opinion*; for I must be allowed to observe, that *we* know (if *some* of the gentlemen who have been examined here do *not* know) that this remedy has been employed for ten or fifteen years *by the most intelligent* medical practitioners *in every quarter of the globe*, for the cure of *this self-same disease*. Therefore, when it is hinted that this remedy has never before been employed for such a purpose, we can only say, that *if indeed it had never been so employed, we necessarily become entitled to the reputation of great discoverers in physic*; to which reputation, however, we resign all claim.”—*Minutes of Evidence*, pp. 141, 142.

In consequence of the differences of opinion here alluded to by Dr. Latham (his evidence is dated the 20th of June), the Secretary of State for the Home Department, Mr. Peel, wrote to the President of the College of Physicians, Sir Henry Hallford, on the 23d of June, as follows:

“In consequence of the illness which has long prevailed at the Penitentiary, and the differences of opinion which have been expressed by medical men of considerable eminence, with respect to the causes of the disorder, and the nature of the remedies which it is proper to apply, I am induced to request that you will

bring the subject under the consideration of the College of Physicians, and that you will have the goodness to move the appointment of a Committee for the purpose of visiting the Penitentiary, and of reporting to me their opinion upon the nature of the disorder which prevails in that establishment, and upon the probable efficacy of the present course of medical treatment.”—The Committee, consisting of Sir Henry Hallford, President, Doctors Henry Ainslie, Edward Ash, W. G. Maton, Thomas Turner, and Pelham Warren, report upon the two questions submitted to their investigation as follows:—
“From the testimony of the medical officers, compared with the details given uniformly by the patients themselves, of the former stages of the disease prevalent amongst them, that the disorder has borne a *dysenteric* character. But we have to observe, that the patients are now far advanced towards recovery, and that the several symptoms which distinguish dysentery prevail no longer. Many, however, still continue ill of a milder complaint of the bowels. Upon the second question we report, *that the treatment by mercury, adopted in this disease, appears to have been very successful.*”

The observation of Dr. Latham, that “this remedy has been employed for ten or fifteen years by the most intelligent medical prac-

tioners in every quarter of the globe," is perfectly correct; but it is by no means the whole truth. It is above thirty years (double the period) since the efficiency of mercury for the cure of dysentery, in common with other diseases, was first discovered in Asia; and it has been known for upwards of twenty-five years in America, Africa, and Europe. This is an essential point to determine; because, coupled with the preceding Report of the College, it ascertains the period, after their adoption by all the rest of the world, at which that learned body is ready to acknowledge innovations, that are regarded by some of their own members as "great discoveries in physic;" and enables us to infer at what period, according to the precedent thus set by themselves, they may be expected to acknowledge other discoveries of at least equal importance and of similar date;—such, for instance, as the non-existence of pestilential contagion, and the perniciousness of sanitary laws, forming the subject of the present volume.

Why Doctors Roget and Latham should not have felt it a duty to specify the precise source from which they had derived those general principles of cure, which they applied to practice in the Millbank Penitentiary, (it appears from the evidence that the doses of the prin-

cial remedy were even administered at what I had laid down as the exact scientific interval, in such a case, of two hours) I cannot even form a probable conjecture. On the one hand, it seems very difficult to believe that the author of doctrines so very peculiar, and which had, for upwards of a quarter of a century, been pervading the four quarters of the globe; which from the year 1808 had been the subject of medical lectures, and in 1817 and 1818 of publications that have attracted much notice, in the metropolis of Britain, could have been utterly unknown to them. On the other hand, it is not less difficult to believe, that honourable men, like Doctors Roget and Latham, would have committed the injustice of remaining silent, or the meanness of feigning ignorance, on such a point, had their knowledge of the author been sufficiently clear and decided. The explanation of these points, however, is a matter which concerns themselves only: for me, it is sufficient to take measures for the due maintenance of my rights; and to counteract the intrigues of my adversaries, which is their only formidable weapon for preventing the circulation and retarding the adoption of my discoveries. The efforts which have been made in this way, by the schools, are, for baseness, extent, and perseverance, almost incredible.

Between the years 1788 and 1792, I made, as is very well known, a great many experiments to ascertain inductively the value of mercury as a remedy in various diseases in which it had probably never before been employed. At page 22 of my Treatise of 1796 on that subject, after stating the results of my experiments on fevers, &c. are the following observations: “From that period (1792) my confidence in the power of mercury, for the cure of all diseases of indirect debility, became so decided, that I determined to apply it in every case in which the ideas of my patients would admit of the practice, *even in diarrhœa and dysentery, the diseases in which the theory seemed the most difficult of reconciliation.*” The correctness of the principle was verified by its subsequent successful application. In 1793 and 1794, this remedy was employed in dysentery at Batavia, Bencoolen, and in other parts of the eastern seas; and, in 1796, in the general hospital at Calcutta. Some cases, exhibiting the manner and the results of its application, were published along with the treatise above mentioned. These cases, together with portions of the substance of the original treatise, were reprinted in London, in 1818, in my “Practical Illustrations of the Progress of medical Improvement for the last thirty Years,” &c. to which I beg to refer

the reader who may be desirous of further information on the subject. At pages 60, 73, 77, 84, and 177 of that work, he will find cases of dysentery; and at page 188, a very aggravated case of scurvy, promptly cured by mercury: in diarrhœa, the practice had become so common, that the instances were no longer thought worthy of being noted. The Committee of the College of Physicians unnecessarily went, therefore, beyond the line of strict correctness, in assigning to the Millbank epidemic a character so exclusively *dysenteric*, as if that alone could have justified or demanded the use of mercury; the disease notoriously partaking throughout much more of the character of diarrhœa, and especially of scurvy, than of dysentery. Sir Gilbert Blane, one of the witnesses, indeed, assumes that mercury is prejudicial in scurvy; and he would dismiss a medical officer from the navy who should employ it. So would Doctor Baird, another of the witnesses. He had never heard or read of the practice. *Minutes of Evidence*, p. 201.

Were authority of any value in science, the opinion of these gentlemen would undoubtedly be entitled to be regarded in scurvy. But, if they had never known the *scientific* application of mercury in that disease to be followed by failure, or to be absolutely productive of mis-

chief, upon what grounds could their *a priori* objections to the practice be maintained? Not only is mercury in fact a decidedly efficient remedy in scurvy; but its use, upon principle, was indicated precisely by the symptom which would have deterred the schools from its employment—the ulceration of the gums. Upon similar inferences, in a large fleet of East India-men, after a long passage, whilst His Majesty's 36th regiment, on board the *Busbridge*, was suffering dreadfully from scurvy, losing at one time at the rate of one man daily, as we approached the island of St. Helena, the usual citric *specifics* failing, nitric acid was, at my suggestion, employed with the happiest effect. In the ships *Dover Castle* and *Varuna*, it was, upon the same occasion, used by my pupil, Mr. Crout, with the most decided and uniform success; as evinced by the twenty cases, from 40 to 59 inclusively, from page 180 to 188 of my work last mentioned. Thus, both mercury and nitric acid supersede all the hitherto vaunted *specifics* (to which, although not *as* specifics, I do not deny merit in their degree) in the epidemic of the sea.

The excellence of principles—the superiority of inductive over assumptive medicine, consists in this, that, from determinate processes, we may analogically anticipate determinate results, even

in cases in which no previous experience of precisely similar processes had existed. Thus, in those forms of disease to which I successively extended the use of mercury, after having experienced its decided efficacy in intermittents, yellow fever, &c. from 1788 to 1792, the results surprisingly corresponded with my expectations. What was theoretically anticipated in 1792, respecting the cure of dysentery, was verified practically in 1793, 1794, and still more extensively in 1796: what was inferred or predicted theoretically of plague, at pp. 46 and 47 of my "Dissertation on the Source of epidemic Diseases," &c. in 1796, in India, was nineteen years afterwards, verified practically in the Levant.

In my lectures on the diseases of hot climates, since the year 1808, the use, both internal and external, of mercury, has been strongly recommended in that form of cholera morbus which sporadically is so common a disease in India; regarding it as a modification and extension of that affection of the alimentary canal, which, under certain states of limitation and degree, are called diarrhœa and dysentery; and had the disease, in its epidemic form, become a subject of consideration, I should, upon the same ascertained principles, and with a similar confidence of success, have recommended, *a priori*, precisely the same plan of treatment. The surprise,

then, is not, that, in the pestilential cholera of Hindostan, this remedy, even when applied in the old irregular mode, should have been found of superior efficacy to any other agent ; but that it should not have been scientifically administered, by which a much higher degree of success would have been ensured. Many are prone to regard a treatment as meritorious, rather in proportion to its boldness, than to the correctness of its principles. But where both features are united, it would seem to be an infelicitous taste, which leads to the adoption of the bold, and the rejection of the scientific. Whatever may be the cause, or causes, it is a certain fact, that in nominally adopting the treatment here in question, practitioners have very generally fallen into the double error of administering unnecessarily large doses at unquestionably too distant intervals. Had medical bodies, and individuals, to whom authority has been attributed, fortunately taken as much pains to investigate the merits of my principles, and of the practice founded upon them, as they unhappily appear to have, conscientiously no doubt, shown an anxiety to prevent all knowledge of them from transpiring, or to obstruct their progress, much of the mischief, which has arisen from the omission to apply mercury, as well as from its misapplication, for the last

thirty years, might have been averted. Had no influence against experiment been employed, truth and error in this case would have long ago found their proper level. For having, even at this time of day, ventured to apply heterodox principles, in a manner so closely approaching to scientific accuracy, Doctors Roget and Latham, shackled as they must necessarily have been by certain delicate considerations, merit no common applause.

With respect to those of my principles, which relate to the cause and prevention of disease, they are still less extensively received, and perhaps less generally understood, than those which relate to the nature and cure. It is by no means the whole, even of this subject, but only a branch of a branch of it, that I have undertaken, upon this occasion, to investigate. The observation of the celebrated French physician Lieuteaud, that the proximate cause of disease in general is involved in utter darkness (*atra caligine mersas*) applies even with greater force, if possible, to the cause of that extensive class of maladies, called epidemic and pestilential; since the superaddition of a stupendous delusion, and of a system of laws founded upon it, opposes, with respect to them, an almost insuperable obstacle to elucidation. It must be obvious, that I can here only allude to the doctrine of

pestilential contagion, and the system of sanitary laws. The invalidity of that doctrine, and the perniciousness of the system founded upon it, I had in different publications repeatedly shown ; but more especially in my “ Results of an Investigation respecting epidemic and pestilential Diseases, including Researches in the Levant concerning the Plague,” in 1817 and 1818. Since the date of that publication, an important member has re-appeared among the family of pestilences, which, in its epidemic capacity, had not previously excited much observation. Cholera, or cholera morbus, after ravaging Hindostan and other countries of the East, is now, in the eighth year of its progress, approaching the frontiers of Europe. The Court of Directors of the Hon. East India Company having been pleased to grant me the perusal of the official Reports of the Medical Boards of the Bengal and Bombay presidencies, containing statements of the opinions and the practice, in that highly interesting malady, of several hundred medical officers of the first education and the best experience any where existing ; and the Worshipful the Levant Company, the perusal of the official correspondence, on the same subject, of the British Consul in Syria ; from these respectable sources, I am enabled to confirm, by the most unquestionable evidence, all the prin-

ciples which I formerly advanced, whether respecting the nature and cure or the cause and prevention of epidemic maladies; but more especially respecting what is *not* the cause of these diseases, and which non-entity absolutely forms the subject of discussion in the present volume. The demonstration will, I think, now be found complete. The politico-medical avalanches of pestilential contagion and sanitary laws, which were wont to hang over their devoted heads, being levelled with the ground, empested communities may henceforward look up to heaven, without the constant apprehension of being utterly destroyed. Disincumbered from those mortal enemies of health and life, and almost insurmountable impediments to knowledge, the subject will revert of right to the province of the physician; from which, by an extraordinary effect of superstition, it had been so long disjoined. The statesman, the legislator, the police, and even the municipal officer, will, in propriety, have no more to do with epidemic, than they have heretofore had with sporadic diseases. To the physician alone, untrammelled by Juntas or Boards of Health; unapprehensive for his personal security, and freed from the responsibility imposed by sanitary laws, will devolve the duties of directing, in the ordinary course of his profession, the means of prevention

and of cure ;—duties, which, under the sway of these laws, he could not have hoped to perform, either with safety or success.

On this subject, public prejudice in favour of established error, although paralysed, has not yet wholly expired. The partisans of pestilential contagion, having now no other dependence than upon what remains of this prejudice, have endeavoured to produce a persuasion, that, regardless of the consequences to the public health, the abolition of sanitary laws has been sought merely to favour the interests of commerce. This allegation, at least in as far as I am concerned, is, like all the other parts of the system, not only wholly unfounded, but essentially absurd. Unless my conviction of the perniciousness, or at any rate the inutility, of the sanitary code had been complete, upon what ground could I rationally have expected, in a matter of such extraordinary delicacy and importance, to have ever carried the opinion of the public along with me? And unless there was a high probability of my being able ultimately to carry the opinion of the public along with me, upon what ground could I rationally have expected any support from commerce? On the other hand, that conviction and that high probability existing, I am rather at a loss to conceive, how their being injurious to com-

merce, could, in a commercial country, be regarded as an argument against seeking the abolition of otherwise pernicious establishments, or a strict inquiry into their operation and effects, even if their merits were only deemed doubtful. For my part, far from thinking it culpable to have availed myself of the support of commerce, in combating the ridiculous but very pernicious dogmas of the medical schools, as applied to communities *en masse*, I am very free to confess that I have, upon this occasion, diligently sought to range every interest, over which I could exercise the smallest influence, on the side of truth; persuaded that it is by the union of public interest with public principle, the mischiefs occasioned by private interest, prejudice, ignorance, or self-love, in any department, can be most effectually obviated or removed.

From the fact, that, during the year which has just terminated (1823), independently of Scotland and Ireland, about seven hundred ships have been exposed to the ordeal of quarantine in the ports of England only; as well as from the following alphabetical list of places, from whence shipping are now, from the four quarters of the globe, subjected to that ordeal, in the quarantine stations of this country; some slight general idea may be formed,

by persons who have not been accustomed to investigate this subject with any particular view, of the extraordinary impediments and injuries to which the commerce of the whole world is exposed, in consequence of those fanatical regulations. Adra, Aquilas, Alexandria, Algiers, Alicante, Alicata, Almeria, Almazarona, Altea, Ancona, Baltimore, Barbadoes, Barcelona, Bathurst, Bayonne*, Bay of Rosas, Bencoolen, Benin River, Bombay, Boney River, Brazils, Brooklyn, Buccari, Cadiz, Cagliari, Calabar, Cape of Good Hope, Carthagen, Catania, Cephalonia, Cetta, Chesme, Chioggia, Chozzie, Civita Vecchia, Constantinople, Corfu, Denia, Egoness, Faro, Fiume, Foggia, Gallipoli, Genoa, Gergente, Gibraltar, Havannah, Heyeres, Jamaica, Lecata, Leghorn, Malaga, Marsala, Marseilles, Malta, Messina, Mogadore, Naples, New York, Odessa, Palermo, Partendick, Patras, Petersburg, Port Mahon, Portoqueto, Salou, Seville, Siculania, Sierra Leone, Smyrna, St. John's, St. Mary's, Susa, Syracuse, Taganrog, Tangiers, Tarragona, Teirun, Termina, Terranova, Terravieja, Trapania, Trieste, Trincomalé, Valencia, Venice, Villanova, West Indies, Zabia, Zante.

* The quarantine against Bayonne probably was imposed at the time when the French afterpiece to the Barcelona tragedy was attempted to be got up at Passages, and so ludicrously failed.

In this list, we find, on the side of Asia, ships from Bombay, Bencoolen, and Trincomalé ; on the side of Africa, ships from the Cape of Good Hope, Bathurst, and the Benin and Boney Rivers ; on the side of America, ships from New York and Baltimore in the United States, from the Brazils in South America, and from the Havannah, Barbadoes, and Jamaica, in the West Indies ; not to speak of innumerable ports in Europe, from Petersburg to Constantinople.

The words “sanitary” and “contagioned,” for the sake of perspicuity, and I have found it necessary, although with reluctance, to adopt.

From the close affinity, in many respects, of the various elementary parts, which enter into the composition of this volume, repetitions of similar or analogical ideas, phrases, and even modes of reasoning, will be found not unfrequently to recur ; a seeming redundancy, which, rather than incur the risk of leaving any material points insufficiently elucidated, I have not been very solicitous to avoid. I deem it the more essential that a faithful record should be preserved of the statements, if even in some measure tautological, by the reiteration of which so much conviction had been produced upon this subject, in *free* Spain, on account of the fate in which the records of all useful knowledge are now necessarily involved, in consequence of

the restoration of despotism in that unhappy country. Had a transient display, rather than lasting effect, been my object, the proceedings upon that occasion would have been published much sooner: for the delay, I trust, ample compensation is made by the addition of materials which would not otherwise have been obtained.

In treating of questions, in their nature essentially controversial, I have not committed the inconsistency of seeking wholly to avoid controversy. But, excepting where ridicule was more befitting the subject, which not unfrequently happened, I have endeavoured strictly to adhere to induction of experiment, the only sure method of investigation, as taught by that immortal man,

“ who from the gloom
Of cloister'd monks, and jargon-teaching schools,
Led forth the true philosophy.”

Without conceiving myself at all bound to notice trivial opposition, I have held it as a maxim, in consideration of the great importance of the subject, that I ought not to decline refuting or explaining whatever objections to my principles might appear to be either novel, or pertinent, or calculated to impose. But it is remarkable, so completely had my previous

labours embraced and exhausted as it were every point of the controversy, that, numerous as have been the criticisms on my doctrines, scarcely an opportunity of acting upon this maxim has occurred, unless by replying, for the twentieth time, to old propositions brought forward under new forms. To such of these as might, from bearing an official character, have some adventitious weight attached to them, as those which are noticed in section 31, I have not refused to reply. From those of my scholastic commentators, who, instead of endeavouring to disprove my facts or to refute my arguments, in the fullness of their humility, have accused me of arrogance; in the correctness of their reasoning, of sophistry; or, in the plenitude of their learning, of ignorance; I accept the homage which they have thus involuntarily rendered to the correctness of my premises, and the legitimacy of my conclusions.

CONTENTS.

Introduction	Page 1
--------------------	--------

SECTION I.

Sketch of the Author's early proceedings respecting Pestilential Contagion	39
--	----

SECTION II.

Refutation of Reports of the College of Physicians to the Privy Council, respecting the Author's work upon Epidemic Diseases, &c.	50
--	----

SECTION III.

Refutation of the Report of the Select Committee of the House of Commons appointed to consider the validity of the doctrine of Contagion in the Plague, in 1819	71
---	----

SECTION IV.

Much time lost and great public injury sustained by considering the preceding Reports as conclusive of the question of Pestilential Contagion and the merits of Sanitary Laws.—Course recommended to be now pursued	101
---	-----

SECTION V.

Proceedings in Spain up to the period of the Author's arrival in Catalonia	110
--	-----

SECTION VI.

Manifesto of a free union of fifteen Native and Foreign Physicians, assembled at Barcelona, respecting the cause of the Fever of that city, in 1821, presented to the Cortes.	122
Notes to the Barcelona Manifesto	144

SECTION VII.

Representation made to the Cortes from Barcelona by the Author.—Determines to proceed to Madrid	167
---	-----

SECTION VIII.

Proceedings upon the Author's return to Madrid from Barcelona.—Protest presented to the Cortes against all projects of Sanitary Laws	Page 174
--	----------

SECTION IX.

Exposition presented to the Spanish Cortes, demonstrating the non-existence of Pestilential Contagion, and the perniciousness of Sanitary Laws	188
--	-----

PART I.

of the Exposition to the Cortes.

Proofs of the non-existence of Pestilential Contagion	198
---	-----

SECTION I. (*being Sect. X. of this work.*)

Original demonstration of the non-existence of Pestilential Contagion.—The subject must be considered as a whole ..	199
---	-----

SECTION II. (XI.)

Of Epidemic Diseases	202
----------------------------	-----

SECTION III. (XII.)

Of Contagious Diseases	205
------------------------------	-----

SECTION IV. (XIII.)

System of Pestilential Contagion.—Its inherent absurdity ..	206
---	-----

SECTION V. (XIV.)

Origin of the system of Pestilential Contagion	212
--	-----

SECTION VI. (XV.)

The absence of all proof of the existence of Pestilential Contagion is alone sufficient proof of its non-existence	215
--	-----

SECTION VII. (XVI.)

Proofs, from direct and positive facts, of the non-existence of Pestilential Contagion	217
--	-----

SECTION VIII. (XVII.)

Proofs of the non-existence of Pestilential Contagion derived from the laws of epidemic maladies	223
--	-----

SECTION IX. (XVIII.)

Proofs of the non-existence of Pestilential Contagion, founded on the ' <i>argumentum ad absurdum</i> '	Page 226
---	----------

PART II.

of the Exposition to the Cortes.

Pernicious effects of Sanitary Laws	229
---	-----

SECTION X. (XIX.)

Machinery of Sanitary Laws	230
----------------------------------	-----

SECTION XI. (XX.)

Sanitary Laws are unjustifiable upon principle	236
--	-----

SECTION XII. (XXI.)

Sanitary Laws are, in fact, inefficient for their proposed ends ..	239
--	-----

SECTION XIII. (XXII.)

Sanitary Laws are a source of gratuitous expense and vexation to an enormous amount	242
---	-----

SECTION XIV. (XXIII.)

Sanitary Laws are in themselves a powerful cause of sickness, misery and mortality	244
--	-----

SECTION XV. (XXIV.)

Sanitary Laws are injurious to science, commerce, navigation, and many others of the best interests of communities	247
---	-----

SECTION XVI. (XXV.)

Sanitary Laws are, in their nature, necessarily arbitrary, capricious, and despotic	249
---	-----

SECTION XVII. (XXVI.)

Sanitary Laws ought to be forthwith abolished ; they admit of no modification or delay	253
--	-----

SECTION XVIII. (XXVII.)

Recapitulation	259
----------------------	-----

SECTION XXVIII.

Critique on the project of the Sanitary Code, being the Author's fourth representation to the Cortes.—Is invested with the Cross of the Order of Charles III.—His Exposition is referred to the Direccion de Estudios.—His departure from Spain	Page 262
---	----------

SECTION XXIX.

Debate of the Cortes on rejecting the project of a Code of Sanitary Laws of their Committee of Public Health	295
--	-----

SECTION XXX.

Analysis of the preceding debate	320
--	-----

SECTION XXXI.

Remarks on official documents from certain Quarantine stations in the Mediterranean, and on a specific charge preferred against the Author by Mr. Tully in his work upon the Plague; also on the criticisms of Dr. Paris and Mr. Fonblanque	344
---	-----

SECTION XXXII.

Observations on the Epidemic of the Millbank Penitentiary, in 1823, compounded of scurvy, diarrhœa and dysentery, from the Report of the Committee of the House of Commons, 8th July 1823	383
---	-----

SECTION XXXIII.

Proofs from official Reports of the non-contagion of Cholera Morbus, as that pestilence has, for the last eight years, prevailed in various countries of the East	396
---	-----

APPENDIX.

Extracts of letters from John Barker, Esq. Consul in Syria, to the Levant Company, on the subject of Cholera Morbus	427
---	-----

INTRODUCTION.

“ Conquer difficulties
By daring to attempt them : sloth and folly
Shiver and shrink at sight of toil and hazard,
And make th’ impossibility they fear.”—Rowe.

IN this volume I am again to demonstrate, by new proofs and illustrations, principally from Spain, the non-existence of pestilential contagion, and the perniciousness of sanitary laws. I am to endeavour faithfully to delineate, to the statesman and the legislator, the foundations, ends, means, objects and effects of that stupendous system of municipal, police, and international regulations, purporting to be for the preservation of the public health, common and peculiar to the nations of Christendom, under the imposing title of “The Sanitary Code.” That of the English East India Company is, I believe, the only Christian Government, that has never adopted these regulations in any shape ; and the Greeks, perhaps the only Christian people. The explanation of these facts is obvious. The subjects of the East India Company are Mahommedans and Hindoos, and the Government, to which the Greeks, previous to their emancipation, were subjects, is Mahommedan. These establishments were not in accord with the opinions

or prejudices of the natives of India, or of the Ottoman Porte ; and the East India Company had not the inclination, nor the people of Greece the power, to adopt them. But, in Greece, now that the interests of Government and people are identified, it is to be apprehended, that, unless strongly and seasonably warned, they may, on this subject, fall into the delusion, which has for centuries been common and peculiar to communities wholly Christian. Such warning, if I be not egregiously mistaken, will be found in these pages. Seeing how much easier it is not to embrace, than to relinquish error, it is to be hoped, that in the infancy of their independence, being at full liberty to choose their institutions, the Greek nation will not hastily adopt a code of sanitary laws, as one of them, in mere imitation of other free and independent states ; but that they will examine and well weigh the merits of the existing controversy on this interesting subject, before they come to any final determination.

All these observations, although upon different grounds, are alike applicable to the New Independent States of South America, where probably the institutions in question have even more potent prejudices in their favour.

Sanitary laws are founded upon the assumption, that epidemic diseases depend upon a specific contagion. This doctrine, in order to distinguish it from that which relates to simple contagion, or to the *virus* of known contagions, with which it has been frequently and sometimes perhaps purposely confounded, I shall invariably speak of as “the doctrine of pestilential contagion.”

According to this system, the specific *virus* of each epidemic differs of course from that of every other : and thus, as many *invisible* and *unknown* contagions, as there are epidemics, are to be restrained by positive laws ; whilst we are confessedly unable, by the same means, to restrain the contagions that are *known* and *palpable*.

The professed ends of sanitary laws then are, to prevent the exportation, importation and spreading of pestilential contagion. Their means are accordingly, for the first, airing or purification of goods, and patents or bills of health ; for the second, quarantine and lazarettos ; and, for the third, lines of circumvallation ; ditches ; single, double, and treble cordons of troops ; single, double, and treble walls ; and in general, all modes of separation, seclusion and restriction. Some description, as far as has appeared necessary for my purpose, of the machinery employed under these laws, will be found in various sections of this work. In the whole history of legislation, a superstructure at once so vast and so pernicious, raised upon a purely imaginary foundation, and supported by a barbarous superstition, is without a precedent or a parallel.

The objects of the sanitary code are epidemic and pestilential diseases generally ; of which cholera, plague, yellow fever, typhus, and dysentery, are the principal : but its operations have chiefly been directed against the supposed contagions of plague and yellow fever.

In some countries, liable to frequent returns of epidemic diseases, as the British dependencies in the Mediterranean, *the entire system* prevails in all its purity : in other countries, not so liable to the fre-

quent recurrence of pestilence, as England for upwards of a century, *the means for preventing the importation of pestilential contagion*, as quarantine and lazarettos, are alone permanently in use: and in others, equally subject to epidemic diseases with the first, as the British dominions in the East and West Indies, and on the coast of Africa, with a consistency altogether worthy of itself, *no part* of the system prevails.

Under so partial an application of the sanitary laws, it is quite obvious, that, whichever of the conflicting opinions be correct, cruelty and injustice are inflicted either upon those portions of mankind which do, or upon those which do not, possess them. The medical partisans of the doctrine of pestilential contagion could not, I should think, have sufficiently reflected on the terrible responsibility which they were incurring, by not renouncing their error, and acquiescing in the universal abolition of the institutions founded upon it, on the one hand; or by not duly following up their own principles, and recommending their universal extension, on the other hand.

Upon every principle, then, whether of the utility or perniciousness of sanitary laws, the subject remains in the most unsatisfactory state. If these laws be efficient for their proposed ends, it is cruel and unjust towards those, who are suffering from the want of them, in various parts of the world, that they should not be universally extended: if pernicious, it is unjust and cruel towards those, who are suffering from their operation, that they should not be universally abolished. The deaths, which happen from epidemic diseases, owing to the non-extension of these laws, if

they be salutary, or to their operation, if they be noxious, are alike attributable, as their remote cause, to the conduct of those medical bodies or individuals, who, by influence or authority, have contrived to obstruct free and efficient inquiry.

Cholera, or *cholera morbus*, although not a new, forms, from the events of late years, a much more prominent feature than formerly, in discussions relating to epidemic diseases. The ravages of this formidable malady, throughout British India, in 1817, 1818, and 1819, as well as its subsequent prevalence in other countries of the East, and its present alarming progress Northwards, even as far as the frontiers of Europe, confer on the subject of this inquiry a considerable augmentation of interest and importance. It has been computed, that, during the three years of its continuance, there perished, from this pestilence, several millions of native inhabitants in the East India Company's territories. The correspondence of Mr. Barker, British Consul in Syria, with the Levant Company, which I have inserted as an appendix to this volume, describes its subsequent progress and devastation in other parts of the East.

Cholera is subject to similar laws with other epidemics. It must, like them, either depend, or not depend, upon a specific contagion; and be a fit, or an unfit, object of sanitary laws. It is the nature of error, as well as of truth, to spread. It does not, therefore, appear to be assuming too much to believe, that, but for the doctrines promulgated in my works since 1796, and taught in my lectures since 1808, cholera would, ere now, have been added, by medical authority, to the list of *contagious epidemics*, and the East India

Company's territories covered with sanitary institutions, to prevent the spreading of that disease, upon the same grounds, as those upon which they have been established in other countries to prevent the spreading of plague, or yellow fever.

The establishment of such institutions, or calling the existing ones into activity, would undoubtedly have been the result, if, instead of appearing in a country, of which the public functionaries are generally composed of individuals more highly and equally enlightened than are elsewhere to be found in similar situations, and the medical departments distinguished for superior intelligence, and peculiar exemption from the prejudices of the schools, this appalling malady had first broken out in Spain, Portugal, or even in France, under the reigning fanaticism ; and, with sorrow and with shame, I feel myself compelled, by a regard to truth, to add in England, the London College of Physicians being the guiding authority, and remaining faithful to their own principles. The establishment of a complete sanitary system in Ireland, with Boards of Health, Pest Houses, &c., in imitation of foreign nations, as late as 1818, with a view to prevent the spreading of a disease notoriously occasioned by want of food, want of employment, and want of hope, together with a slight degree of atmospheric influence, will not readily be forgotten in the annals of science ; and the public advertisements in the journals, soliciting subscriptions for the support of *contagious* fever hospitals, in this metropolis, would almost persuade us that we live in the days of the Council of Trent. The whole of these mischiefs and absurdities, as is shown in different parts of this vo-

lume, is undoubtedly attributable to the culpable neglect of the London College of Physicians to investigate this matter themselves, or to report fairly upon the investigation of others.

In "Reports upon the epidemic Cholera, which has raged throughout Hindostan and the Peninsula of India, since August 1817," written under the superintendence of the Medical Board of Bombay, dated the 24th March 1819, and published by order of the Government of that presidency, we find the following observations upon the cause of this malady. "The exciting and proximate causes of this interesting epidemic, although of the greatest importance to be understood, are, like those of most other epidemical diseases, concealed under complete obscurity,—*'atra caligine mersæ.'* Great difference of opinion exists among practitioners, *as to its contagious or non-contagious influence*, and this difference very naturally arises out of the difficulty of the subject; and when we consider the various and opposite opinions entertained by the most experienced practitioners of Europe on the same question respecting the influenza of 1803, and the divided sentiments which have so long agitated the medical world on the subject of the yellow fever, and even typhus itself, *we do not venture at present to decide upon so important a point.* Several *irresistible facts*, already noticed or related in the following Reports, and its marked anomaly from all hitherto known simple epidemics, would seem to favour the doctrine of (pestilential) contagion, *while the contrary supposition is only supported by a species of negative evidence.* This is a question however of the greatest importance, and ought not to be too hastily entertained as proved,

nor rejected as unfounded ; but prosecuted with that diligent inquiry and cautious induction, which, on every subject of science, are so necessary to the attainment of truth." Preface, p. xxviii. xxx.

The leaning of the Bombay Medical Board being in favour of pestilential contagion, as the cause of cholera, it might have been expected that they would in consistency have recommended sanitary regulations. The great difference of opinion that exists on this point among medical men, they have erroneously imputed to the intrinsic difficulty of the subject ; whereas it is entirely owing to the false knowledge by which it is obscured.

" The slaves of custom and establish'd mode,
With pack-horse constancy we keep the road,
Crooked or straight, through quags or thorny dells,
True to the jingling of our leader's bells."

They labour under the usual misapprehension of there being "*irresistible facts*" in favour of pestilential contagion, and of the *contrary supposition* being only supported by a species of negative evidence ; the truth being, that the existence of such an agency is merely an unsupported affirmation, and the opposition to it a negation philosophically correct. In science, we are bound to disbelieve assertions, merely because they are not proved, and by no means bound to prove a negative. But the Reports of the Bombay Medical Department, notwithstanding this indecision, which appears to belong personally to the members of the Board, are, upon the whole, meritorious and useful ; and I shall apply them in their proper place.

A striking illustration of the injurious consequences, in a political view, of ignorance of the true causes of

pestilence, or a belief in the existence of an imaginary cause, or an indecision between opposite opinions, is to be found in the fate of the centre division of the Anglo-Indian army in 1817, which I extract from the Report drawn up by order of Government, under the superintendence of the Bengal Medical Board, by their secretary, assistant surgeon Jameson.

From the 6th to the 8th of November 1817, cholera attacked the “centre division of the grand army, then encamped under the personal command of the Marquis of Hastings, near the banks of the Sinde in Bundelkund.”

“It was here that the disease put forth all its strength, and assumed its most deadly and appalling form. It is uncertain whether it made its first approaches on the 6th, the 7th, or the 8th of the month. After creeping about, however, in its wonted insidious manner, for several days, among the lower classes of the camp followers, it, as it were in an instant, gained fresh vigour, and at once burst forth with irresistible violence in every direction. Unsubjected to the laws of contact and proximity of situation, which had been observed to mark and retard the course of other pestilences, it surpassed the plague in the width of its range, and outstripped the most fatal diseases hitherto known, in the destructive rapidity of its progress. Previously to the 14th it had overspread every part of the camp; sparing neither sex nor age in the undistinguishing virulence of its attack. The old and the young, the European and the native, fighting men and camp-followers, were alike subject to its visits; and all equally sunk in a few hours under its most powerful grasp. From the 14th to the 20th or 22d the mor-

tality had become so general, as to depress the stoutest spirits. The sick were already so numerous, and still pouring in from every quarter, that the medical men, although night and day at their posts, were no longer able to administer to their necessities. The whole camp then put on the appearance of an hospital. The noise and bustle, almost inseparable from the intercourse of a large body of people, had nearly subsided. Nothing was to be seen but individuals anxiously hurrying from one division of the camp to another, to inquire after the fate of their dead or dying companions ; and melancholy groups of natives bearing the biers of their departed relatives to the river. At length even this consolation was denied to them ; for the mortality latterly became so great that there was neither time nor hands to carry off the bodies, which were then thrown into the neighbouring ravine, or hastily committed to the earth, on the spot on which they had expired, and even round the walls of the officers' tents. All business had given way to solicitude for the suffering. Not a smile could be discerned nor a sound heard, except the groans of the dying and the wailing over the dead. Throughout the night especially, a gloomy silence, interrupted only by the well-known dreadful sounds of poor wretches labouring under the distinguishing symptoms of the disease, universally prevailed. Many of the sick died before reaching the hospital ; and even their comrades, whilst bearing them from the out-posts to medical aid, sunk themselves, suddenly seized by the disorder. The natives, thinking that their only safety lay in flight, had now begun to desert in great numbers ; and the highways and fields, for many miles round, were strewn with the bodies of those who had left the camp with the

disease upon them, and speedily sunk under its exhausting effects. It was clear that such a frightful state of things could not last long; and that, unless an immediate check was given to the disorder, it must soon depopulate the camp. It was therefore wisely determined by the commander in chief, to move in search of a healthier soil and purer air. The division accordingly, on the 13th, marched in a south-easterly direction towards Talgong and Sileia; and after several intermediate halts, on the 19th crossed the clear stream of the Betwah, and upon its high and dry banks at Erich, soon got rid of the pestilence, and met with returning health." Report, p. 12. 16.

How fortunate for the safety of the British power in India, that we were not opposed by an European army, having an active, enterprising, and intelligent leader, instead of ill-disciplined and ill-commanded Asiatics, will appear from the intentions of Scindia to avail himself of the distressed state of our army to break his engagements, and his inability to carry these intentions into effect, as afterwards stated by the Marquis of Hastings on his return to the presidency, in these words:—"The dreadful pestilence which made such havoc in the division under my immediate command, forced me to quit the banks of the Sinde, and to seek a favourable country for the recovery of my sick. I did not find this until I was fifty miles from the river which I had quitted. Fortunately the change of air was rapidly beneficial; for a very short time had passed when I received intelligence of an invitation said to have been given by Scindia to the Pindarees. He was reported to have promised them, that, if they would come so near to Gwalior, as to make his getting

to them easy, he would break his treaty, and join them with the force which he had at his capital.—The Pindarees were in full march for Gwalior, without meeting even a show of impediment from the troops of Scindia stationed in their route; though the co-operation of his army for the extinction of the Pindarees was an article of the treaty.”

This event singly would be enough to establish the immense importance to nations, in a political point of view, that an accurate knowledge should prevail respecting the causes of epidemic diseases. But, if not, the disasters of the Walcheren expedition in 1809, and of many others, which will fall properly to be noticed in the second part of this work, in treating of the real causes of these maladies, will amply supply the deficiency. But for the ignorance, and culpable ignorance, of medical men respecting laws of nature the most obvious, however distant from the rules of the schools, these disasters would not have happened. “Were it my business to understand physic,” says Locke, “would not the safer way be to consult nature herself, in the history of diseases and their cures, than to espouse the principles of the Dogmatists, Methodists, or Chymists?”

The Bengal Medical Department have declared unanimously in favour of the non-contagious properties of this malady. But we have had, in respect to this very matter, so many proofs of the danger and the folly of relying upon mere opinion, in any degree, in deductions of science, that, although from my previous knowledge of the laws of epidemic and those of contagious diseases, and of the phenomena of cholera, I can have no doubt to which class of maladies it must belong,

I feel that it would be improper, in the absence of proof, to give more weight to this than to the opposite conclusion. The proofs, from which is deduced the inference in favour of the non-existence of contagion in cholera, in order not unnecessarily to retard the publication of this volume, I am obliged, the Reports from India having but very recently come to my hands, to throw into one of the concluding sections. That from Madras, if there be one, I have not yet received.

In England, whilst cholera was raging in Hindostan, an East Indiaman, I have been informed, was consistently enough ordered into quarantine, under the apprehension that she might have imported some of the *virus* of this renovated pestilence: and but a very few days have elapsed, since I learned that the Pacha of Egypt, in imitation of the Governments of Europe, seriously meditates the introduction of sanitary laws into the countries over which he rules, not with any view of preventing the spreading of pestilential contagion; in which he can have no belief, but in order to satisfy those Christian countries, with which he has commercial dealings, that they may buy his cottons &c. without the danger or apprehension of being empested. It may be expected, that, in order to remove any fear respecting cholera, quarantine will, on the same principle, be imposed on merchandize from Hindostan, and other parts of India, coming to Egypt. In this manner, a general extension of sanitary laws, even upon grounds of commercial policy, would be the inevitable consequence of the prevalence of the doctrines upon which these institutions are founded, and of their continuance in nations of preponderant influence and authority. The present objections of the

Chinese, Mahommedans and Hindoos to these establishments, might, by degrees, yield to the belief in the superior wisdom of the enlightened Governments of Christendom, or to commercial hopes or fears; and thus, instead of witnessing only a few sanitary nations, it might be our fate to live in a sanitary world.

If *cholera* depended upon contagion, what ought, according to the principles of the pestilential contagionists, to be the consequences? The consequences ought to be, that, not a bale of muslins, bag of cotton, or box of indigo, (I do not recollect whether rum and sugar, *cum multis aliis*, be deemed to be susceptible of pestilential contagion in the first degree,) should be allowed to be exported from India, or a chest of tea from China, without having been previously expurgated, and accompanied by a bill of health; that they should not be allowed to be landed in England, or elsewhere, without having performed quarantine, and undergoing a new purification; and that, whenever or wherever the disease did actually appear, the whole sanitary apparatus, which I have already described, should be put into full and immediate application. Under such a system, the whole Indian army would not, even in a middling epidemic, be half sufficient for the service of the cordons! But, all these matters being arranged, a trifling difficulty respecting the prevention of importation would still occur, which, however, those, who are fully initiated in the mysteries of pestilential contagion, will doubtless be able easily to solve. Cottons and muslins, we are informed by the earliest authorities, are not only extremely susceptible of pestilential contagion, but tenacious of it in the highest degree; so that, after having lain for

years, or perhaps for centuries, in an old wall, these substances, upon being exposed to the air, have been believed to propagate pestilences ! Now, the difficulty which I feel is, how, under such circumstances, we could be assured, that a quarantine of forty days, or even forty *years*, could ensure absolute safety ; or that muslins from India and tea from China, which had been manufactured or packed by persons labouring under that pestilence, might not contain enough of the *virus* of cholera to enable it to propagate the disease, at any period less or more remote, from our shops or our warehouses ! Of this we may be assured, that if, in the progress of events, cholera should at any time appear in England, and more especially in London, such would be the source to which it would unhesitatingly be attributed by the advocates of pestilential contagion ; and it may easily be conceived, what an instantaneous depreciation even a rumour of this kind would effect in the value of merchandize from all the countries, which might be implicated in the suspicion of having been the source of this presumed importation.

Nor ought such an event to be regarded as wholly improbable, when we consider the course and progress of epidemics in general, as well as those of this particular malady ; or the variety and uncertainty of their extent and duration. They may travel from north to south, or from south to north, or from any one point of the compass to its opposite ; but the course from Asia to Europe, has, I think, been the most usual. Of the rate of travelling I shall speak in another place. In reference to their diffusion, they, at one time, attack a single city or province ; at another, one or more na-

tions; now one, and now several quarters of the globe. As to their permanence, they may endure for one or more seasons, or even for half a century. One epidemic is recorded to have lasted, with intermissions, for fifty-two years. The existing cholera has already prevailed for eight years; and when or where it will cease in its progress northwards, no man can say, unless, as our Consul in Syria seems to expect, the German pestilential contagionists of the frontiers should be able to snare it at the Contumatz*. That this form of pestilence is not unknown in England is certain. Sydenham describes it as having prevailed epidemically in 1669, and in 1674, 5 and 6. Of the disease of the latter period, he says, in a letter to Dr. Brady, "*Exeunte æstate Cholera Morbus epidemice jam sæviebat, et insueto tempestatis calore evectus, atrociora convulsionum symptomata, eaque diuturniora secum trahebat, quam mihi prius unquam contigerat,*" &c.

Again, the cottons of Egypt might be imbued at once with the contagions of cholera, brought from India by the Red Sea, and of native plague; and, if the vessel touched in any port of Spain, with that of yellow fever besides. This would constitute an entire new case, for which I am not aware that any of the regulations of the sanitary code have yet provided. I suggest it to the serious consideration of sanitary legislators. And, in order that they may perceive how very probable is its occurrence, I beg leave to repeat the alleged manner of the introduction of the *virus*

* Where quarantine is performed on the frontier of Transylvania, bordering on Wallachia.

of cholera from India into the Persian Gulf, from which, if that allegation were true, it could not fail to be easily transported to Egypt, and all the adjacent countries. In a letter to the Levant Company, dated Aleppo, July 16th, 1823, Mr. Barker, the British Consul in Syria, says, "In the summer and autumn of 1821, the cholera morbus broke out nearly at the same time at Muscat, Bushire, and Bassora. Having for five years previously ravaged India, (whence it is said to have spread to China, Siam, and the island of Java,) *it was reasonably supposed to have been imported into the Persian Gulf with the merchandize of Hindostan.*" After describing its progress through Arabia, Persia, and Syria in 1821, 2, and 3, he thus states its actual position, and anticipates its arrest. "It continues to advance by similar stages to Constantinople, and from thence to the frontiers of Germany, *where a happy experience has taught the means of arresting its further progress, and preventing its introduction into civilized Europe*"! By a recent application to myself from the Russian Consulate here for advice respecting the prevention and treatment of this malady, I find its approach towards the borders of the Caspian Sea confirmed. And the intense interest and anxiety which the progress of this malady excites has been further evinced, by an application from French and Russian authorities to the East India Company for information concerning it, for the use of the Boards of Health at Paris and St. Petersburg.

Under these circumstances, it must be of the greatest and most pressing importance to the world at large, that the questions respecting the existence of pestilential contagion, and the effects of sanitary laws,

should be decided upon clear and satisfactory grounds. If these laws be efficient for their proposed ends, how cruel and unjust that the many millions, who must have perished from cholera, for want of them, during the last seven years, in India, China, Siam, Java, Arabia, and in all the countries on the borders of the Persian Gulf, even as far as Ispahan ; in Asia Minor, Egypt, and Syria ; and on the shores of the Caspian Sea, should not have had the benefit of the protection of these laws ! How unjustifiable, that those infallible means of preservation should not have been extended to those persons that are constantly liable to suffer from yellow fever in the West Indies, or from other modifications of typhus on the coast of Africa ! How negligent on the part of the advocates of pestilential contagion, not to have recommended the extension of the life-preservers of sanitary laws, even to the Ottoman dominions, not alone for the protection of the Mahommedan, but indirectly for the safety of the Christian world ! The neglect then on the part of the advocates of their efficacy, to recommend the extension of these institutions, not only to all the higher pestilences, but even to every epidemic, and to every nation, cannot but be regarded as a shameful dereliction of public duty, upon their own principles.

Nay, as, according to the most genuine versions of the doctrine of pestilential contagion, those nations, that do possess sanitary laws, cannot be entirely safe against the importation of an exotic *virus*, unless means be at the same time employed to prevent its *exportation*, by all other nations, being liable to those maladies, and having intercourse with the former, (even then, indeed, security could not be regarded as

always certain, seeing that these invisible commodities, like more material ones, are considered capable of being made objects of contraband,) would it not have been further the indispensable duty of the medical partisans of this system to have recommended to the Governments, which they were called to advise, to use their influence, authority,—or, if necessary, force,—to cause their universal adoption? My philanthropic friend, Count Harroch, of Vienna, who petitioned the representatives of the combined cabinets in 1815, that they would invite or compel the Grand Seignor to introduce sanitary laws into his dominions, was at least so far a consistent pestilential contagionist. But complete consistency would require, that all the believers in the truth of this system should unite in exhorting the Governments of Christendom, that they would invite, or, if necessary, compel not only the Grand Seignor, but the English East India Company, the Emperor of China, the King of Persia, &c., &c., &c., to adopt it. There is no middle course. If the sanitary code be indispensable to self-preservation in any country, as the principles of the pestilential contagionists infer, there can be no ground for hesitation or doubt. Not only would statesmen and legislators be justifiable for insisting upon the adoption, by all other states without exception, (for there can be no state, into which a specific contagion may not be imported, or from which it may not be exported,) of those indispensable regulations; but they are even imperiously called upon, by the duties of self-preservation, so to do.

But if, at a proposition of this kind, statesmen and legislators would consider it a duty to hesitate, ought they not also to deem it incumbent on them to have

recourse to every practicable measure of investigation, before resolving to maintain those sanitary establishments, which already exist, seeing that the burdens and mischiefs, which they occasion, are certain and palpable, and their utility strongly called in question? And if it should be further made to appear, that the doctrine of pestilential contagion is an unqualified fiction, and that sanitary laws are not only inefficient for their proposed ends, but otherwise highly pernicious—that, independently of their deleterious operation, physical and moral, upon health and life, they are greatly and unequivocally injurious to liberty, morals, science, justice, revenue, commerce, navigation, manufactures, expeditions by sea and land, individual intercourse, and the intercourse of nations, &c., &c., &c. ; would it not be unjust and cruel, more especially towards the multitudes, who, in an empested state, are liable to suffer from their operation ; to all the individual interests that are injured by their existence ; and to the public at large, of every community, who are made gratuitously to incur an enormous expenditure and loss, that they should not be universally abolished ?

And here it is proper to examine one of the delusions, which I perceive forms a principal obstacle to a just decision. The received doctrines upon this subject are but articles of medical faith, of the merits of which physicians have been erroneously supposed to be the exclusive judges. The questions at issue are, in reality, questions of fact, not of physic ; they belong to legislation, not to medicine ; and of their merits physicians are, from prejudices of education, of all men the least competent to judge. Statesmen

and legislators, then, cannot be bound to be guided by the *opinion* of a majority, or even the whole of the medical faculty, in a matter of which every one of themselves is even more competent to judge than any physician, in so far as he is unbiassed by the prejudices on this subject entertained in the medical schools: nay, they cannot be justifiable in maintaining laws or institutions, which occasion great expenditure; immense injury to commerce, navigation and manufactures; together with numerous other evils; besides a prodigious increase of the very sickness and mortality, which it is their proposed end to avert or to remedy, merely because medical bodies are, from false pride, unwilling to confess, that, upon a controverted subject, they have all their lives been in error. On the plain question of the existence or non-existence of a very remarkable agency, the determination of which carries with it such important legislative consequences, it is incumbent on statesmen and legislators to make use of their proper senses. It is incumbent on them not to confide too implicitly in the representations of the followers of the craft and mystery of conjectural medicine. By what process, for instance, are the College of Physicians of London to form a judgement on this matter? I will admit them to be, collectively or severally, possessed of very great, indeed of very wonderful sagacity: but I am notwithstanding somewhat at a loss to conceive, how a body, whose members, with very few exceptions, have never explored beyond the sources of the Thames, the Cam, or the Isis, can intuitively possess a knowledge of the maladies, which desolate the banks of the Ganges, the Nile, or the Bosphorus, equal to that

acquired in the usual way by persons who have visited those regions. I have seen cattle on board of an East Indiaman appearing to inhale with satisfaction the fragrance of the cinnamon, at a computed distance of twenty leagues from the island of Ceylon ; but that the senses of a collegian in Warwick-lane should be capable of discerning the properties of pestilences in the most distant regions, is a phenomenon infinitely more surprising, if not absolutely miraculous. Oh ! but from their knowledge of general principles, we shall perhaps be told, the College are doubtless able to judge concerning particular facts !

If the College indeed did possess general principles in medicine, this might be true. But where are *their* general principles to be found ? To me at least they are as undiscernible as pestilential contagion : and, if we may judge by the tenor of a Report, made by this body to the Privy Council, upon a branch of the same subject, dated the 15th Nov. 1815, they are not themselves by any means insensible of their deficiencies in this respect. “ It is unnecessary for the College to explain to their Lordships the *uncertain nature* of *all* medical evidence ; but it is proper that their Lordships should be informed, that the history of physic presents numerous instances of *recorded facts, which, after having obtained credit at certain periods of time, have by subsequent investigation and inquiry fallen into disrepute, or have been disproved.*” This, as to the present case, was prophetic ; and appears to partake of inspiration. But, if the College have neither condescended to discover general principles themselves, nor to adopt them when discovered by others ; and if the species of evi-

dence, to which they have hitherto had recourse, has been found invariably uncertain ; does it therefore follow, that the laws of nature, always with deference to the by-laws of this learned body, do not include general principles, or supply certain evidence, as applicable to the affairs of physic ?

For my part, I am ignorant upon what ground the *dogmas* or *opinions* of this College should be considered entitled to be put in competition with the *proofs* and *demonstrations* of individual physicians unconnected with them, unless it be that its members derive their title to the fellowship from an education at Universities, notoriously deficient in the means of *medical* instruction ; and that, *in consequence of such education*, their by-laws are deemed entitled to supersede the laws of nature, as well as the laws of the land, and themselves to enjoy a monopoly of the care of the health and lives of all the inhabitants of the British metropolis :

“ Now, by two-headed Janus,
Nature hath formed strange *Fellows* in her time.”

MERCHANT OF VENICE.

Whether, in this manufacture, the universities of Oxford and Cambridge have successfully emulated nature, the reader will, after having perused the second section of this work, be probably able to judge.

That a small number of individuals, however qualified, should, by virtue of a charter originating in the darkness of the very commencement of the sixteenth century, or by reason of particular places of education, be suffered, in these enlightened times, to possess a monopoly in the care of the health and lives of the

inhabitants of this great city, in such manner that they have not a free choice of their own physicians, but

“Of the doctor in the mode must die,”

is an abuse at once monstrous and singular in the history of the world; and such as, whilst it occasions disaster to the most enlightened, would reflect disgrace even upon the most barbarous age and nation. Of its unhappy consequences, independently of the obituary, and the state of medicine in London, we have a most striking instance before us, in the adoption, without examination, and the maintenance, contrary to evidence, of those institutions, purporting to be for the preservation of the public health, which I had shown, and now again show, to be most powerful causes of sickness and mortality. But whilst I thus condemn, in the most unqualified manner, a monopoly of so extraordinary a nature, founded upon principles the most unjust, and productive of consequences the most injurious, I must here protest against all imputations of disrespect towards the Universities of Oxford and Cambridge. It may be no fault of the two Universities that they do not possess more ample means of medical instruction, because that may depend upon situation and other circumstances over which they have no controul; and it cannot be their fault, that the London College of Physicians,—I of course speak not of its members individually,—have not observed a conduct, and enacted by-laws, which should be less exceptionable. In respect to the relative position of these bodies, I wholly concur in the opinion so well expressed by my Lord Coke, in the case of

Dr. Bonham : “ *Academia Cantabrigiæ et Oxoniæ sunt Athenæ nostræ nobilissimæ, regni soles, unde religio, humanitas, et doctrina, in omnes regni partes, uberrime, diffunduntur*; but it is true, ‘*nunquam sufficit copia laudatoris, quia nunquam deficiet materia laudis* ;’ and, therefore, those Universities exceed and excel all private colleges, quantum inter viberna cupressus.”—LORD COKE’S REPORTS.

The case of Dr. Bonham was this: Asserting his right as a Doctor of Philosophy and Medicine of Cambridge, of practising physic in London “nulla a collegio petita venia,” and affirming that the president and censors had no jurisdiction over doctors of the Universities; the College, for this, proceeded, of their own authority, to fine and imprison him. He brought an action of false imprisonment, and recovered. Chief Justice Coke and Mr. Justice Daniel, upon this occasion, delivered distinct opinions in favour of the superiority of the Universities, and the exemption of their graduates from the jurisdiction of the College. Yet that body has continued, although they can confer no degree of doctor themselves, to claim the right of undoctoring, as far as regards the practice of London and seven miles round, even the graduates of the two Universities, unless they submit to a previous examination, and are found qualified by them; refusing even to admit to examination but as a matter of favour and at pleasure. An usurpation which Lord Coke reprehended in the following terms: “The University is ‘Alma Mater,’ from whose breasts those of that *private* college have sucked all their science and knowledge (which I acknowledge to be great and profound); but the law saith, ‘*Erubescit lex filios castigare parentes.*’”

The University is the fountain ; and that and the like *private* colleges are *tanquam rivuli*, which flow from the fountain, “ *et melius est petere fontes quam sectari rivulos.*” I wish not to go a single step beyond the doctrine of my Lord Coke in respect to the limitation of the power of the College ; but justice will not be satisfied until the other universities of the kingdom shall be placed upon the same footing, with respect to rights, as these of Oxford and Cambridge. The constitutions of Universities and Colleges claim a prominent place in all projects of law reforms : and it can be no injustice to those original fountains of knowledge, that sister Universities, having equal claims, should be placed upon a level with them.

Why the inhabitants of the metropolis, and seven miles round, should remain satisfied with this medical wardship, if it be injurious ; why the inhabitants of the kingdom at large should not desire to participate in its benefits, if it be useful ; and why the medical graduates of other Universities should be content to hold the power of applying their noxious or salutary agents in London, by virtue of a *licence* from a College, which is in fact, and is declared by the highest authority to be, to Universities, only as the willow to the cypress, or the stream to the fountain, in the same manner as the honest publican enjoys the power of distributing his drugs by virtue of a licence from the police magistrate, are some of the mysteries of physic, which are to me as inexplicable as the belief, by men of otherwise sound intellects, in the doctrine of pestilential contagion, and the utility of sanitary laws, and into which I shall not at present attempt further to penetrate. The effect of an organization of the dif-

ferent branches of the medical profession, altogether peculiar to this country, as powerfully depressive of that exuberance of health in the metropolis, which could not fail to exist under that unrestrained exertion of talent, always attendant upon perfect freedom of professional competition, ought, in the mean time, to allay the fears of those who may entertain any apprehension, that, by over population, this island might possibly run a risk of being pushed off its centre of gravity. If, to this collegiate guardianship of the public health, were added the universal extension of sanitary laws, the happy union, whilst it lasted, I will take upon me to affirm, would infallibly exempt even the most populous districts of the world from all the dangers of excessive multiplication.

To decide upon a piece of mechanism, it is true, we would select a jury of mechanics ; upon the qualities of a piece of cloth, a jury of woollen drapers or of tailors. These are palpable and tangible objects, respecting which such persons are daily accustomed to exercise their judgement: but, towards ascertaining the merits of Islamism or Hindoism, we would choose all other sorts of persons, in preference to the professional expounder of these religions; and, in like manner, towards forming a correct judgement concerning a mere tenet of conjectural medicine,—a matter of pure faith,—an offspring of the imagination,—a creature of the fancy,—unless we wished to be misled, we should prefer a jury of clergymen to a jury of physicians. In this case, I would, with that distinguished medical logician, Sir Gilbert Blane, prefer a jury of lawyers to either: he thinks it would be, on the part of the constituted authorities, more *safe and advisable* to ask

for the assistance of some *members of the bench or the bar*, accustomed to weigh evidence, and investigate facts, or *even of such plain men as compose juries*, than *medical men*." Elements of Med. Logic, p. 183.

Yet, with a surprising disregard of the most familiar principles of human nature, it is the literary supporters of the doctrine of pestilential contagion, the collegiate successors of the very framers of the existing sanitary laws ; the confidential advisers of Governments in matters of quarantine, and the actual superintendants of sanitary establishments, who may be considered as the very high priests of the system, that have been usually consulted respecting the efficiency of establishments, in favour of which, from habit, interest, or consistency, they have naturally so strong a bias ! When the benevolent Howard applied for information, respecting the cause of plague, to the physicians of the lazarettos in the Levant, he was unconsciously laying the foundation of prolonged delusion. It has been observed of the doctrine of the circulation of the blood, that but few physicians embraced it, at the period of its promulgation, who had attained the age of forty years. But, if great political and legislative measures, purporting to be for the preservation of the public health, had hinged upon the question, whether the blood circulates or does not circulate, would not the statesmen and legislators of the days of Harvey have considered it their duty personally to examine it, as a question of fact or science, without attending to the pre-conceptions of medical men ? By such a proceeding, cotemporary physicians would have been obliged, by a due regard to their own interests

and reputation, immediately to adopt and to proclaim the truth.

But instead of proceeding with my own reasoning, let me state an example or precedent, of total disregard to medical opinion on this subject, in a legislative assembly, being the first decision upon record precisely in point. The principle that, on a question of science, facts alone should be attended to, has been virtually recognised and consecrated in a very remarkable manner by a memorable decision of the Spanish Cortes, in October, 1822. Regardless of the *unanimous dictum* even of the medical members of their own body, being *nine* in number, as well as the known opinion of an immense majority of all the physicians of Spain, they rejected *in toto*, after a solemn debate, and by a majority of sixty-five to forty-eight votes, the project of a code of sanitary laws, which had been for years in careful preparation, successively by a commission of the Government and two committees of public health of the Cortes. Their proceedings upon that occasion will be found in Section XXIX of this volume.

Would not the partisans of pestilential contagion in Britain, if they had not in the course of these discussions been made to feel that their doctrine rested upon no firmer a foundation than mere faith, have eagerly proposed the further extension and invigoration of sanitary laws, instead of talking of the propriety of modifying their provisions where they already exist? And are our statesmen and legislators in the predicament of being obliged to acquiesce in the support of establishments demonstrated to be inefficient for their proposed ends, and otherwise highly injurious to

mankind, lest they should, by a just decision, virtually convict medical bodies and individuals, to whom authority has been attributed, of having, instead of endeavouring experimentally to investigate the truth, obstinately persisted in the maintenance of a system replete with error, contradiction, inconsistency, absurdity, and misrepresentation?

Such is the system for the support of which Britain, like other nations, is exposed to a certain enormous annual detriment, of which some, although but a very inadequate, estimate may be formed from the following statements.

From the 5th of January 1800, when the existing system of sanitary laws commenced in England, to the 5th of July 1822, the expenditure for the service of quarantine at home only has amounted to 595,646*l.*; of which some 330,675*l.* have been defrayed from tonnage duties, and 264,971*l.* from the general revenue of the state. This I understand to be exclusive of the purchase of Chetney Hill, the building of lazarettos, and other incidental charges. It is a remarkable circumstance that of these regular charges, nearly three-fourths have been incurred at the out-ports, where there is but little commerce with the Levant, whilst little more than one-fourth has been incurred at the port of London, where the chief part of that trade is concentrated.

It is also a curious phænomenon in the practical application of these laws, that during the years 1811, 1812, and 1813,—the quarantine charges at the port of Scilly exceeding seven thousand pounds,—only one vessel performed quarantine at that station! In 1788, 1789, and 1790, there was also only *one* vessel,

a transient one. I have not seen returns for other years; but, at the same rate, during the ten years, from 1803 to 1812 inclusive, that the quarantine charges at Scilly amounted to 20,522*l.* 13*s.* 1*d.*, no more than three vessels would have performed quarantine there, being at the rate of nearly seven thousand pounds for each vessel! This was the port destined for vessels having empested persons on board. But even these two vessels had no such commodities, but were probably driven in by stress of weather, or some other accident, which does not appear.

From official evidence presented to the select committee of the House of Commons, appointed to inquire into the validity of the doctrine of contagion in the plague in 1819, we find, that no person has, since the establishment of quarantine, at any time arrived in any English port, being ill of the plague; and that no person has been seized with it in any of the lazarettos of this country. And from a petition of the Levant Company to His Majesty in Council against the passing of the quarantine laws, dated the 31st of January, 1720, it appears, that for 140 years preceding that period, the trade with Turkey had been carried on "without any ill consequences." Thus, in a period of 244 years, 140 without and 104 with quarantine, plague has not appeared in England *in consequence of intercourse with the Levant*. (The pestilences which did appear in the course of the sixteenth and seventeenth centuries were of course produced by their proper causes, widely different from, or diametrically opposite in their nature to, a specific contagion.) If, then, 244 years be not sufficiently long to authorize us to conclude that the experiment is complete, we

should ask in vain what period would be sufficient : yet with such irresistible evidence perfectly accessible to them, evidence calculated to convince all persons not proof against conviction, that quarantine and lazarettos could have neither end nor object in England, *even if plague were undoubtedly contagious in the Levant*, did the physicians, who had been appointed from time to time as boards of health, in order to frame systems of sanitary laws, evince the determination not to indulge a single doubt, nor to hazard a single inquiry respecting the validity of the doctrine upon which their regulations were to be founded ; i. e. respecting the existence of the evils which they were to frame laws to remedy ! It was to provide for a case, which in the history of the world has never been known to happen ; viz. the arrival of an empested person in England from the Levant ; that the station of Scilly, with a pest-house, was established by one of these sagacious boards ; and it is singular enough that a physician who had been at one time almost perpetual president of the College, and on the occasion of the Walcheren inquiry candidly confessed, at the bar of the House of Commons, his ignorance of camp and *contagious* diseases, should have proposed that the double walls of the lazaretto of Mahon, *thirty feet high*, then in our possession, should be preferred as a defence against the *contagion* of the Levantine pestilence.

“ Oh, hateful error, melancholy's child !

Why dost thou show to the apt thoughts of men

The things that are not ? ” — SHAKESPEARE.

Even more than a proportional direct and incidental expenditure, on account of sanitary establishments,

we may reasonably infer, is incurred at Malta, Gibraltar, and the Ionian Islands.

In England, between the years 1815 and 1823 inclusively, 6519 vessels have performed quarantine, being on an average about 724 vessels annually. Estimating the burden of these vessels at the average of only 150 tons each, and the loss sustained, in consequence of detention in quarantine, by tear and wear of ships, cordage, and rigging, wages and maintenance of crews, damage, deterioration and pilferage of cargoes, &c, at one pound per ton, the total amount of loss sustained from this cause would be 108,600*l.* annually. If at 200 tons, the amount would be 144,800*l.*

The amount of positive loss annually sustained by the public, owing to this cause, by vessels doing quarantine at Malta, Gibraltar, and the Ionian Islands, must be proportionally greater than in England.

The extraordinary expenditure of communities in times of actual pestilence, although it may not be capable of being ascertained with due approximation towards accuracy, must reasonably be deemed to be very great, when we consider the additional disbursements to which they are liable, during the three or four months that a pestilence usually lasts, on account of scarcity of provisions, removal, flight, &c. In 1813, when La Valetta, the capital of Malta, was divided into thirty-two plague divisions or sections, it is believed that the extra expenditure in provisioning the inhabitants whom it had been thought proper to shut up, and in building thick and high walls to repel contagion, &c., could not have fallen short of a million sterling.

But the detriment occasioned by sanitary restric-

tions, in preventing agriculture, commerce, navigation, and manufactures, &c., from extending to those limits which they would otherwise attain, is above all calculation. They may be regarded as being more instrumental than any other cause, or perhaps than all other causes combined, in checking the progress of population, wealth, and prosperity in the British dependencies in the Mediterranean: and, if any nation possessing or acquiring territory in that quarter were to abolish, or not to establish sanitary laws, the value of these dependencies would be greatly diminished, even from their actual standard, unless the regulations in question were, with respect to them, also wholly removed.

Were these laws repealed in Britain, their discontinuance in Malta, Gibraltar, and the Ionian Islands would follow of course: and Genoa, Venice, Leghorn, Ancona, Trieste, Marseilles, the Spanish ports, and even Odessa, if they did not abolish them from conviction or imitation, would soon be obliged to abandon them in self-defence. Nay, the civilization and prosperity of Egypt, and all those countries which do not possess sanitary establishments, would be materially advanced by the removal of these restrictions by other nations. Thus, all nations and all colonies would be reciprocally benefited; as well those which are, as those which are not, burdened with these pernicious establishments.

It is, for many reasons, incumbent on Britain to set an example in this matter; but particularly, because the sanitary system is far more injurious to her than to other commercial nations. France does not suffer proportionally near so much, since, from proximity,

the commerce of Marseilles, with all parts of the Levant, may more readily embrace those seasons, which are most favourable to short quarantines; nor the Netherlands, since there quarantine is neither so rigid nor of such long duration. The sum total of the advantages, which would arise to the different interests which they affect in this country, from the removal of these restrictions, will of course be variously estimated by individuals, according to their particular views. But, without attempting a calculation, I should think that no person, who has minutely attended to the subject, will be disposed to estimate them at a less amount than several millions sterling annually.

The great pecuniary detriment which they occasion to nations, would certainly be a strong additional ground, if any could be required, why sanitary laws should be universally abolished; but it ought to be of itself sufficient, that they are disgraceful to science and civilization, and destructive of health and life.—In my “Results of an Investigation respecting epidemic and pestilential Diseases, &c.” it has been proved that pestilential contagion does not exist; that sanitary laws are consequently without an end or object; that they are highly injurious to many of the best interests of communities; that they increase in an extraordinary ratio the sickness and mortality which it is their professed end to avert or to remedy; that they are a powerful engine in the hands of despotism for the oppression and degradation of nations; and that, if even pestilential contagion did undoubtedly exist, the sanitary code would still be both unjustifiable and pernicious.

The purpose of the present publication is further to

illustrate these propositions ; to confirm them by additional proofs, derived from the results of subsequent researches, particularly from the history of the fever of Barcelona in 1821, and other epidemics in Spain ; to elucidate the subject still further, by a review of two Reports of the London College of Physicians to the Privy Council in 1818, respecting my former work upon epidemic diseases ; of the Report of a Select Committee of the House of Commons, appointed, on an application from me, to inquire into the validity of the doctrine of contagion in the plague in 1819 ; and of the proceedings of the Spanish Cortes upon the rejection, according to the principles of my various representations to that body, of the project of a code of sanitary laws of their Committee of Public Health in October 1822.

In order further to remove doubts and to explain difficulties, I have inserted the representations made to the Spanish legislature, and other authorities, during my residence in Spain ; also a refutation of some official and demi-official objections, principally founded upon representations from the quarantine stations in the Mediterranean ; together with facts and observations derived from sources of unquestionable authenticity, respecting the progress and recent ravages of that formidable pestilence called *cholera*, in Hindostan and other countries of the East ; and a few remarks on the Report of a Select Committee of the House of Commons, respecting the epidemic of the Millbank Penitentiary, dated July 8th 1823. If that epidemic had happened previous to my agitation of the question of pestilential contagion, it would undoubtedly have been ranked among contagious maladies, a circum-

stance that might have given rise to much inconvenience and vexation, and even to great mortality in the metropolis, by the operation of terror and the sanitary code. And, if the causes of epidemic diseases had been generally understood, it would not have happened at all, since *then* such an establishment would never have been placed in such a situation ; and thus, on a single object, half a million sterling would have been saved to the State.

The duration of my researches and controversies upon this subject has now extended to a period of nearly thirty years. And, if I had neither investigated nor written, I leave it to enlightened and unbiassed judges to decide whether the doctrine of pestilential contagion, *as a whole*, might not have remained, if not unquestioned, at least unrefuted, for three times thirty years ; and to estimate from thence, what is, in a view of common interest to nations, the value of my labours, should I have been at length so fortunate as to have laid the question of its existence finally at rest.

Feeling as much pleasure in retracting error, as in advancing truth, I deem it incumbent on me upon this occasion to state, that when some years ago the official inquiries, which I had solicited, terminated without being productive of any direct satisfactory result, I was not fully aware of the extent of the difficulties which Government must have experienced in deciding between the force of novel truths, unsupported but by reason on the one hand, and the weight of custom, authority, and numbers on the other hand, in a matter so deeply affecting the health and lives of communities as sanitary laws ; and that, in looking for

the immediate repeal of these laws, as an effect of those investigations, I was consequently much too sanguine in my expectations. My cooler judgement has since instructed me, that, at so early a stage of the official discussion, and under the prevalence of the delusion by which the subject was yet obscured, such a measure would probably have been impracticable in 1819, even if it had met with the full concurrence of His Majesty's Ministers. But since that period circumstances have, in respect to this inquiry, very materially altered. Elucidation has been proceeding towards maturity, until it may be regarded as at length complete. In Spain the result far surpassed my most sanguine anticipations. There, sanitary laws were rejected by a majority equal to that by which I had apprehended that they would be confirmed. And if, in Britain, it should even be still doubted, that enough has been done to warrant the immediate repeal of this most noxious code, it cannot at any rate be denied, that I have here adduced new and invincible reasons, why the examination of the subject should be uninterruptedly prosecuted, until a determination be formed, either that the system of sanitary laws is pernicious, and ought to be universally abolished, or that it is beneficial, and ought to be universally extended.

ON
PESTILENTIAL CONTAGION
AND
SANITARY LAWS.

SECTION I.

SKETCH OF THE AUTHOR'S EARLY PROCEEDINGS RESPECTING PESTILENTIAL CONTAGION.

Old error thus with shades impure
Throws sacred truth behind,
Yet sometimes through the deep obscure
She bursts upon the mind.—CUNNINGHAM.

THE subject of epidemic diseases consists of three distinct branches: 1. The doctrine of pestilential contagion, and the system of sanitary laws. 2. The real causes, and proper means of prevention of epidemic maladies. 3, Their nature and cure.

The immense influence upon health and life, as well as upon many others of the best interests of communities, of a doctrine and a code of laws, so universally applicable as those which the first branch of this inquiry embraces, renders it of far more importance, in the present stage of the investigation concerning epidemic diseases, than both the other branches com-

bined. To search for any other causes of pestilence than contagion, were the doctrine of pestilential contagion valid, or for any other means of prevention than sanitary laws, were sanitary laws efficient for their proposed ends, would be at least supererogatory; and under the operation of a code, of which an inevitable effect is to induce the sick, from the dread of being abandoned, to conceal their illness, until concealment becomes impossible, i. e. until the disease is beyond remedy,—to attempt to apply even such principles of cure as have been ascertained to be under other circumstances efficient, would be useless, or worse than useless, by bringing a correct mode of treatment into disrepute. Besides that, by limiting the discussion, in the first instance, to one of three objects, each of them extensive and distinct, the further advantage is obtained of depriving unfair opponents of the opportunity, which would be afforded by the blending together of so many and such dissimilar topics, of perplexing and mystifying a subject in its nature sufficiently intelligible.

Such are explicitly the reasons why, in this investigation, the inquiry into the validity of the doctrine of pestilential contagion, and the efficiency of sanitary laws for their proposed ends, is kept distinct from, and made to take precedence of, the other branches of the subject; and why, in the course of my previous elucidations of pestilential diseases, I have thought fit, in the representations which it has been my lot to make to the Governments, and to the municipal, medical, or other public bodies, of various countries, exclusively to adhere, in the first instance, and as if nothing had been done in respect to the

others, to this particular branch of the inquiry ; a branch that may be said to possess even greater interest in a political, municipal, legislative, and philanthropical, than it does in a medical point of view.

In order to give the reader some idea of the previous state of this branch of the inquiry, and to put him in a better condition to appreciate the result of my researches in Spain, as well as to leave an authentic record to future times of the progress made towards establishing correct notions on a subject of such extraordinary importance, I think it right to prefix a short historical sketch of my proceedings on this subject, up to the period of my expedition to that country.

In 1790, early in my professional career, having occasion in the course of treating cases of sporadic* yellow fever, in Jamaica, to remark that the disease was not propagated by contact ; and not being able to perceive any real difference between individual cases of sporadic and epidemic yellow fever of equal intensity, I began to entertain strong doubts of the correctness of the *dogmas* respecting *pestilential contagion*, which I had learnt in the schools. Pursuing this train of reasoning, my doubts were gradually extended to other epidemic maladies, and these doubts were soon converted into certainty : the events of the fever of Philadelphia, in 1793, served to complete my conviction, that “ *no general disease, which is capable of affecting the same person repeatedly, is ever propagated by contagion.*” The illustration of this general proposition, deduced from undeniable facts, and founded in the very nature of things, constituted the

* Isolated—single—not epidemic.

theme of my earliest publication on this subject, printed in Calcutta, in 1796, under the title of "A Dissertation on the Source of epidemic and pestilential Diseases," &c. My proofs rested principally on the following leading circumstances: 1. The absence of all proof of any contagious property in epidemic diseases; 2. The incompatibility of other causes to which they are distinctly to be traced, with the existence of a contagious property; 3. The absence of phænomena in epidemic diseases, which, if they depended upon a specific contagion, would necessarily be present: to which I have added, as results of subsequent researches; 4. The presence of phænomena in these diseases wholly incompatible with a contagious property; and 5. The exposition of the original source of the erroneous *hypothesis* of pestilential contagion. Although many persons may have at various periods doubted or disbelieved the existence of such a property in particular epidemics, mine is unquestionably the first, and perhaps the only refutation yet existing, of the doctrine of pestilential contagion universally.

In 1798, I was presented, by the surgeon of an American ship in the port of Calcutta, with a copy of my several tracts, including the dissertation upon epidemic diseases, as reprinted at Philadelphia in 1797; and some years afterwards eminent physicians of that country openly renounced the doctrine of pestilential contagion.* About the same period, an

* In 1804, Dr. Rush, in the preface to his "Medical Inquiries and Observations," thus expresses himself: "In the fourth volume, the reader will find a retraction of the author's former opinion of the yellow-fever spreading by contagion. He begs forgiveness of the friends of science and humanity, if the publication of that opinion has had any influence in increasing the misery and mor-

importation of these tracts took place from America to London; where they underwent a sort of regular medical excommunication. In 1800, travelling in Germany, I met with an American criticism of my Asiatic doctrines, of considerable length, belonging to Professor Reich of Berlin. That year, an English edition of the Dissertation on Epidemic Diseases appeared in the free town of Hamburgh; and, in 1805, a German translation of it at Leipsic, and at Coburg in Saxony. In London, since 1800, it has formed an article of the medical circulating libraries; and it was in that year the first attempt was made from England to investigate the plague of the Levant upon the avowed principle of non-contagion. It failed; the investigator, from want of adequate knowledge of the treatment of the disease, perished.

The code of quarantine regulations, framed in 1800, by a Committee or Board of Health*, appointed for that purpose by the Privy Council, and revised, and, with some trivial alterations, confirmed by another Committee similarly constituted, in 1805†, is

tality attendant upon that disease. Indeed such is the pain he feels that he ever entertained, or propagated it, that it will long, and perhaps always deprive him of the pleasure he would otherwise have derived from a review of his attempts to fulfil the public duties of his situation."

* The Committee of 1800 was composed of eleven members; G. Baker, L. Pepys, J. Gisborne, A. S. Hamond, Pat. Russell, Jas. Johnston, Gil. Blane, J. Robertson Barclay, Thos. Boone, E. Lee, and J. Green; the first nine physicians, and the two last Levant merchants.

† The Committee of 1805 was composed of nine physicians: A. S. Hamond, J. Milman, A. Munro, Lucas Pepys, J. Hunter, H. R. Reynolds, W. Heberden, J. N. Harness, and Jas. Hervy

that which is now in force in England ; and is of course constructed after the model of the sanitary codes of the continent of Europe. To judge from their Report, it does not appear that the Committee of 1800 were acquainted with the existence of any doctrines concerning the plague, although they had been in general circulation since 1796, and had already made the tour of Asia, America, and Europe. But if so, they were not therefore justifiable for having omitted to ascertain, by valid proofs, the existence of the evil against which they were appointed to propose remedies. To take facts for granted, and to legislate upon assumption, is at least a very extraordinary, and, I should hope, a very unusual course. The Committee of 1805, being better informed upon this point, were still less excusable. They were appointed “ to consider and report the measures, which it would be proper to adopt, in case the plague, or other infectious (contagious) disease, attended with great mortality, *shall pass the barrier of the quarantine*, and actually appear amongst us.” They presented two Reports to the Privy Council, dated the 30th of April and the 15th of May 1805, consisting of an “ outline of a plan to prevent the spreading of the plague, or other contagious diseases ;” in the latter of which they say, “ In considering a subject of this kind, it is obvious that we must not risk the lives of our fellow-creatures through a confidence in any *speculative* opinions, *which want the sanction of experience*.” Had the Board taken due pains to inves-

Secretary. Hamond and Pepys had been members of the former Committee. Both Committees were composed principally of Fellows of the College of Physicians.

tigate the opinions, which they were pleased to represent as speculative, they could not but have perceived that they were *conclusions logically deduced from undeniable premises*, whilst those which they have chosen to take for granted, as being founded upon what they call the *experience* (meaning the *practice*) of ages, are but vague or baseless traditions—mere inventions of the most superstitious times. Had the Committee, upon this occasion, entered into a substantial inquiry, instead of taking the received doctrines for granted, much time, expense, and controversy would have been spared: “If men had been willing to learn, all these controversies might have died the very day they were first brought forth.”—*Hooker*.

In September, 1800, I accompanied Mr. Windham, then our envoy at the court of Tuscany, with a view to settle in Florence, from whence it was my design to pass over to the Levant, as opportunity might offer, in order to carry into effect my projected experiments on the plague, i. e. practically to verify my theoretical conclusions. Towards effecting this object Mr. Windham promised, by all the means in his power, to concur. On our arrival at Vienna, we learnt that the French had got possession of Tuscany, which of course frustrated my plan of settling in Florence, as well as my ulterior project. It happened, that at this time a destructive epidemic prevailed in Cadiz. Wishing to procure permission to proceed to that city, with the knowledge and consent of Lord Minto, then British ambassador at Vienna, which I thought it necessary previously to obtain, there being war between England and Spain, I applied to the Spanish ambassador at that capital for passports. These his

excellency declined to grant upon his own authority. I even offered to place myself under the strictest surveillance whilst performing my experiments in Cadiz. I had previously presented to him a copy of my Dissertation on the Source of epidemic and pestilential Diseases, and urged all the arguments that occurred to me, both by letter and personally, to induce him to grant my request. But he could not, or would not, act without authority from his court. I observed to him, that as before he could receive an answer from Madrid, and I could, in consequence of such answer, should it prove favourable, repair to Cadiz, the epidemic, *not being contagious*, but depending upon the season, would cease. This I truly predicted, from the usual course of epidemics in those latitudes, would happen in the course of December. The scruples of the ambassador were perhaps fortunate; for had I gone that year to Cadiz, and treated the epidemic, it is more than probable, the Inquisition being in full vigour, and my doctrines of non-contagion avowed, that strong means would have been taken to defeat my object, and probably to punish me for my infidelity.

My next attempt to procure a theatre for experimental inquiry was equally unsuccessful. It was by way of memorial to the late Duke of Portland, then in the administration, transmitted through his son, Lord William Bentinck, dated Hamburgh, May 3, 1801, soliciting a special commission, for practically investigating the plague in Egypt, a British army having then possession of that country. The purport of the answer, which I received, was, according to the best of my recollection (for I have not the letter an-

nouncing it before me), to this effect,—that “the nature of the arrangements made for Egypt did not admit of any new medical appointments.” Content with having done all that depended upon me, I determined to wait some more favourable opportunity of carrying my project into execution.

This opportunity I *then* thought would most certainly occur in France, where scientific projects, not much more profound than mine, were so splendidly encouraged and patronized, *at least in the journals*. Accordingly it was not without some degree of impatience that I remained at Hamburgh, in the practice of my profession, till the signing of preliminary articles of peace, between Britain and France, gave me an opportunity of visiting the latter country in November 1801.

After a few months residence in Paris, I resolved on a mode of proceeding towards obtaining the means of carrying into effect my long-meditated plan for the investigation of the plague. In March, 1802, I presented, through Senator Perregeaux, a memorial to M. Chaptal, minister of the interior, proposing, “that an institution should be established at Constantinople, or some other part of the Levant, for the treatment and investigation of the plague: that the funds necessary for the support of this institution should be provided by means of voluntary subscription of governments and of individuals: that it should be under the superintendence of all the foreign ambassadors at Constantinople for the time being, and of one of the members of the Ottoman Government: that the Sublime Porte should be invited to allot a certain district of land for the site of

the necessary buildings, &c., and to confer on it certain privileges and immunities, such as could be accorded without offence to any of the laws or customs of the country," &c. The object of this institution was to illustrate, by facts and experiments, the nature and cure, and the cause and prevention of that form of epidemic usually called the plague of the Levant.

This was a plan which I thought likely to attract the attention of Napoleon, had it been made known to him ; and, in that case, to have been acted upon, had it not materially interfered with any of his favourite views or prejudices. But it was referred by the minister, as a matter of course, to "*l'Ecole de Médecine de Paris* ;" and from the moment I was assured it had received this destination, I considered disapproval as certain. They reported my plan to be "of too extensive a nature to admit of being carried into execution." And this opinion was intimated to me by M. Chaptal, in a polite note containing abundance of praise of my zeal in the cause of humanity. The charge of undue opposition to improvement is not intended to be exclusively applied to the School or College of Medicine of Paris, or by whatever other name that seminary may now be designated. It is considered as common, in various degrees, to all bodies of this description, in every country, retaining, as they still do, too much of the character of the monastic institutions from which they originally sprung. Trembling, like the Sorbonné of old, lest science should prematurely dissipate the darkness of their *dogmas*, they are always the first to denounce, and the last to adopt, any useful innovation.

The proceedings adverted to will be found recorded

more in detail, in a small volume, entitled “An Excursion in France, and other Parts of the Continent of Europe,” &c., published by Longman and Co. in 1804 ; one paragraph of which I cannot refrain from quoting here, in proof of our inability to estimate duly how much an individual, in a cause which he has at heart, may be able to accomplish by perseverance, even with means apparently slender, and against obstacles apparently insurmountable. “Here I dismiss the subject for the present, perhaps indeed for ever. As an individual, it is not very probable that I shall ever possess a sum of power or of influence, sufficient to vanquish the prejudices, and obstacles of everykind, which so extensive an investigation would have to encounter. But should any Government or Governments, or any powerful body of men, do themselves the honour of patronising, in an efficient manner, so noble and useful an inquiry, I shall always be ready to risk my life and reputation in giving practical proofs of the doctrines which I have advanced on these subjects.”—(pp. 24, 25.)

During the expedition to Walcheren, in 1809, I offered my services as a volunteer, conscious of possessing some knowledge of epidemics. But that was not the quality wanted by the Army Medical Board of that period. They preferred candidates, who, if they knew nothing else in the world, could swear by pestilential contagion, which had been found a sovereign specific for covering medical disasters. I gave a picture of their public delinquencies. They were removed from office. Sir Lucas Pepys, upon ceasing to be Physician general to the army, ceased also to be President of the College of Physicians.

SECTION II.

REFUTATION OF REPORTS OF THE COLLEGE OF PHYSICIANS, TO THE PRIVY COUNCIL, RESPECTING THE AUTHOR'S WORK UPON EPIDEMIC DISEASES, &c.*

Never by tumbler thro' the hoops was shown
Such skill in passing all and touching none.—DUNCIAD.

FORTUNATELY I did not dismiss the subject *for ever*, but having, after a lapse of years, by the patronage of His late Royal Highness the Duke of Kent, and of Lord Grenville and the Levant Company, been enabled experimentally to examine the plague in Turkey, I have, since that period, succeeded in bringing the investigation of epidemic diseases generally, to such a state of maturity, that the doctrines in question *must*, in defiance of the prejudices by which their reception is still opposed, in no long time (discussion remaining free) be every where officially acknowledged and applied.

This object has been effected by my researches in the Levant in 1815, and in Spain in 1821, in addition to my original publications in India in 1796. The results of the former investigation, in two volumes, published in 1817 and 1818, have now been some years before the world, and have given rise to much official discussion and examination. In this place it will be proper to take a cursory view of the proceedings in this matter, as such a view will necessarily confer additional elucidation on the result of my

* "Results of an Investigation respecting epidemic and pestilential Diseases, including Researches in the Levant concerning the Plague." 2 vols. 8vo., T. and G. Underwood, Fleet-street, London, 1817 and 1818.

subsequent researches in Spain, now in part about to be communicated to the public:—they will mutually illustrate each other. This end cannot perhaps be more effectually answered, than by inserting here the correspondence between His Majesty's most Hon. Privy Council and the Royal College of Physicians, in 1818, respecting my work on the plague of the Levant, and the Report of a Select Committee of the House of Commons, appointed in 1819, on an application from me, "to consider the validity of the doctrine of contagion in the plague," together with a brief refutation of the grounds upon which the renunciation of the doctrine of pestilential contagion, and the abolition of the system of sanitary laws, were then resisted by these authorities.

The Privy Council to the College of Physicians.

Council Office, Whitehall,
16th February, 1818.

Sir,

I am directed by the Lords of His Majesty's most Honourable Privy Council to acquaint you, that their attention has recently been called to a publication by Dr. Charles Maclean, which he has communicated to their Lordships, on the subject of epidemic and contagious diseases, and particularly with reference to the Plague.

The subject is obviously of so much importance to the welfare of mankind in general, that the Lords of the Privy Council do not feel that they could pass by Dr. Maclean's communication without notice and their Lordships naturally look to the enlightened Members of the Royal College of Physicians, as being eminently calculated to furnish them with the

most valuable information, and to elucidate a subject which is no less interesting than difficult: under this impression their Lordships have directed me to transmit to you a copy of the printed volume* published by Dr. Maclean, together with a written summary of his argument, which the Doctor has prepared by their Lordships' direction†; and to request that you will submit the same to the consideration of the Members of the Royal College of Physicians, in order that they may report, for the information of the Lords of His Majesty's most Honourable Privy Council, the view which the College take of this question, and more particularly their opinion on the following propositions, as stated by Dr. Maclean, viz.:

1st—Whether it be sufficiently proved, that epidemic diseases do not depend upon contagion; and that, consequently, quarantine and other regulations of plague police are not only useless but pernicious.

2nd—If not, what additional proofs are considered necessary.

3rd—Whether the doctrine of contagion, as the cause of epidemic diseases, be still deemed to stand, in whole or in part, confirmed and unshaken, and all the establishments founded upon it worthy of being continued.

I am, Sir, your most obedient humble servant,

(Signed) JAMES BULLER.

The President of the Royal College of Physicians.

* The first volume of my "Results of an Investigation respecting epidemic and pestilential Diseases, including Researches in the Levant concerning the Plague," published in 1817.

† Inserted in No. 31 of the "Pamphleteer," for April 1820.

The College of Physicians to the Privy Council.

College of Physicians,
31st March, 1818.

Sir,

I have the honour to transmit to you, for the information of the Lords of His Majesty's most Honourable Privy Council, the following answers to the questions proposed by their Lordships to the Royal College of Physicians :

1st—We are of opinion, although some epidemic diseases are not propagated by contagion, that it is by no means proved that the plague is not contagious, or that the regulations of plague police are useless and pernicious ; we are persuaded on the contrary, from the consideration of the experience of all ages, and some of us from personal observation, that the disease is communicable from one individual to another.

2nd—The additional proofs which would be required of the non-existence of contagion, must be such proofs as would be sufficient to counterbalance the general opinion of medical and philosophical authors and historians, from the times of Thucydides, Aristotle, and Galen, to the present day ; so late as the year 1813, the contagious nature of plague was fully ascertained by the British medical officers in the island of Malta.

3rd—The doctrine of contagion appears to us to be wholly “unshaken” by any argument which Dr. Maclean has advanced ; at the same time we think it probable, that some of

the personal restrictions enforced on the establishments for quarantine, might be modified without risk to the public safety.

I have the honour to be, Sir,

Your most obedient servant,

(Signed) CLEM. HUE, Registrar.

To James Buller, Esq., Council Office, Whitehall.

The Privy Council to the College of Physicians.

Council Office, Whitehall,

30th Sept. 1818.

Sir,

I am directed to acquaint you, that the Lords of His Majesty's most Honourable Privy Council have, since the receipt of your letter of the 31st March last, received from Dr. Maclean a second volume of his work on the non-contagious nature of the plague, which the Doctor has represented to their Lordships, as containing additional proofs of the accuracy of his views upon that subject; and as being in consequence not unlikely to lead to some variation in the sentiments of the College of Physicians. Although the Lords of the Privy Council cannot undertake to say how far this may be the case, the importance of the subject induces them again to bring it under the consideration of the College of Physicians; and I am therefore directed to transmit to you a copy of the second volume of this work, and to request that you will lay the same before the College for that purpose.

I am, Sir,

Your most obedient humble servant,

(Signed) JAMES BULLER.

To Clement Hue, Esq., Registrar of the College of Physicians.

The College of Physicians to the Privy Council.

College of Physicians,
November 7th, 1818.

Sir,

I am directed by the President and Fellows of the Royal College of Physicians to acknowledge the receipt of your letter of the 30th September, together with a copy of the second volume of Dr. Maclean's work on epidemic and pestilential diseases, and to state to you, for the information of the Lords of His Majesty's most Honourable Privy Council, that nothing contained in Dr. Maclean's second volume has altered the opinion expressed by the College in their former Report.

I have the honour to be, Sir,

Your most obedient servant,

(Signed) CLEM. HUE, Registrar.

To James Buller, Esq., Council Office, Whitehall.

Were the question of pestilential contagion a mere matter of faith, which could only be decided by authority, or by numbers, then doubtless it would be justifiable to defer to a *mere dictum* of the College of Physicians, or to the votes of a majority of the medical faculty: but it is a matter of fact, resting, like all others, on appropriate evidence, of which medical men are more incompetent judges in proportion as they are, from prejudices of education, habit, or interest, less unbiassed than other persons of equal intellectual power and general acquirements: and of all the members of the medical faculty, the Royal College of Physicians of London, for the reasons which I shall presently state, must, in all that regards the question of pestilential contagion, and the merits of sanitary

laws, be deemed to be by far the least unbiassed.—It is unfortunate, when Governments, swayed by routine, or impelled by necessity, find themselves in the predicament of being obliged to consult, respecting the propriety of adopting an important innovation, the very persons who have the most powerful motives for resisting a change.

The College had, in their corporate capacity, in the course of centuries, been in the habit, as often as the subject was brought before them, of committing themselves, as a matter of course, in favour of the existence of pestilential contagion, and of the efficiency of sanitary laws for their proposed ends, without any previous inquiry into the real state of the facts; and were in 1800 and 1805, still without any previous inquiry into the existence of the evil, for which these regulations were intended as the remedy, the framers of the quarantine regulations, which now exist in England.

To have pronounced against the doctrine of pestilential contagion, and in favour of the abolition of sanitary laws, would have been to condemn all their own former numerous decisions; an act, which, although it would have been only a virtual declaration that they were at that time wiser than they had been at any of these former periods,—so wise as to make a merit of renouncing error,—would have indicated a magnanimity which but rarely falls to the lot of individuals, and still more rarely to that of bodies of men. It was therefore quite evident beforehand what would be their decision on the subject of this reference.

Having stated the grounds upon which I consider the College as incompetent, because not unbiassed

judges in this case, I now proceed to show that the Reports which they did make upon this occasion, dated the 31st of March and the 7th of November 1818, are in every particular destitute of foundation.

Respecting the general features of these documents I may observe, that instead of detailed and argumentative Reports, assigning fully the grounds of the opinions delivered, as might have been reasonably expected, and I had expressly required, they consist of nothing but bare unsupported negatives to two or three questions proposed to them by the Privy Council, from a summary of doctrines, which had, with a view to simplify the inquiry, been presented by me to that body. Thus the merits of a system, of stupendous magnitude, unparalleled importance, and universal interest, the development of which has occupied several years of laborious investigation, and filled two volumes of no inconsiderable size, were disposed of in *about twenty lines*!

The phraseology of these Reports is also not a little remarkable; instead of speaking of the doctrines of *pestilential* contagion, or of the doctrine of contagion in *epidemic and pestilential diseases*, or of the doctrine of *contagion in the plague*, they uniformly speak of "the doctrine of contagion," simply; in which sense, as these terms properly include only diseases that are unquestionably contagious, their opposition, had I denied the existence of such a property in respect to them, would have been perfectly well founded. To the doctrine of contagion thus limited within its proper sphere, it must have been quite obvious that I had never intended to object: that this phraseology was deliberately chosen, for purposes of mystification,

I cannot allow myself to suspect ; and yet so egregious an inaccuracy, on the part of so learned a body, is not a little surprising. In the next reference which may be made to them upon this subject, if that should be thought fit, it is to be hoped the Privy Council will insist upon their making the proper distinction between *simple* contagion and *pestilential* contagion.

Having taken this slight glance at the general features of the Reports of the College, let us now examine their particular structure, by dissecting each sentence or paragraph in succession, beginning with the first in point of date, or that of March 31st 1818.

1. "We are of opinion, although some epidemic diseases are not propagated by contagion, that it is by no means *proved* that the plague *is not* contagious."

In science, it has not, I believe, been very usual to consider the affirmative side of any question as *proved*, merely because the negative has *not* been proved. The *onus probandi* is, on the contrary, if I understand the matter rightly, always deemed to rest with the persons affirming ; those denying never being in reason required to prove a negative. In ancient times, the absence of all proof of existence was wont to be regarded as sufficient evidence of non-existence, "*de quid non apparentibus et de quid non existentibus eadem est ratio.*" If contact were sufficient evidence of contagion, and in pestilence no other has been adduced, gout, rheumatism, and dropsy, might be equally proved to possess that property. Under these circumstances, and independently of the evidence adduced on the opposite side, it might have not unreasonably been expected from a public body, which has

been characterized as “profound, sad, and discreet, groundly learned and deeply read,” when solemnly called to sit in judgement upon a question of singular importance, and universal applicability, that they would have made a becoming and philosophical declaration to this effect:—“As no proof has ever been given, that plague, or any other epidemic disease, is capable of being propagated by contagion; and as, if so remarkable a property did exist, the proof could not have lain so long concealed; for these reasons alone we hold it to be our indispensable duty to declare it as our firm conviction, that such a doctrine has not the slightest foundation.” But as we are told, that in modern times, physicians, despising the ancient laws of nature, have taken the liberty to change the seat of the heart, so the College, reversing the axioms, and contemning the rules of inductive philosophy, have, by the help of a new species of reasoning altogether peculiar to medicine, felt themselves authorized to conclude, that “as it is by no means proved (in their opinion) that the plague is *not* contagious, it is *therefore satisfactorily proved* (in their opinion) that the plague *is* contagious.” Had the premises been correct, the conclusion would still be erroneous: it would with due deference to modern *medical logicians*, be a perfect *non-sequitur*. I know of nothing to which this mode of ascertaining physical truth is so analogous, as that which is invariably pursued to ascertain moral truth by another renowned tribunal. The College impose upon medical sceptics the penalty of being obliged to conform to the affirmative, unless they can prove the negative, of a most momentous proposition of science: the Inquisition consign those,

who are accused of religious or political scepticism, to the torture, unless they can give satisfactory proof that they are not deficient in faith! nor is it any sensible alleviation of this evil, that it is not *always* impossible to prove a negative. In the physical world, the negative of a simple proposition of science may sometimes be proved, by showing the impossibility of the affirmative; as, in the moral world, innocence may sometimes be proved by showing the impossibility of guilt; but these cases would be only rare instances of good fortune, or exceptions to a general rule; whilst such a perversion of all the accredited rules of evidence, in judicature and in science, as has been mentioned, would, if generally extended, prove almost uniformly fatal both to innocence and to truth. In estimating the effects of the Inquisition, and of sanitary institutions, upon the well being of society, contrary perhaps to what might *prima facie* be expected, we find, on a strict examination, the balance of humanity considerably in favour of the holy office. The Inquisition, however horrid the torture which it inflicts upon the individuals whom it selects for its vengeance, and however extensive and complete its influence in preventing the utterance, perhaps even the conception, of truth, and the progress of human happiness and prosperity, has not physically destroyed as many of the human species in a whole century, as have fallen victims to sanitary establishments, consequences of the doctrine of pestilential contagion, in a single season! But because I make this declaration am I to be charged with being the apologist of the Inquisition, or the denunciator of medical corporations? I speak of the *effects of institutions*, not of the

intentions of men; these are not by any means so widely different as ignorance or knavery, wishing by implication to arrogate a superior inherent propensity to virtue, would fain maintain. The four emphatic words of the historian, "Man and for ever!" embrace a comprehensive, although compendious code of ethics. The monk, whose destinies have allied him to a most inhuman tribunal, might, if his lot had been differently cast, have proved a good member of general society, in the precise proportion that he is a flaming inquisitor: the medical corporator, whose overflowing zeal impels him the most violently to maintain the *dogmas* of his body, or to resist the new truths which would overthrow them, might, if no medical corporations existed, or if he considered his interests as identified with those of society at large, have proved, in the same proportion, if he had turned his attention that way, a good cultivator of science, perchance a most excellent investigator,—nay, a profound discoverer. I leave the sagacious reader to apply these observations, which he will find applicable much beyond the pale of medicine or religion.

2. "We are persuaded on the contrary, from the consideration of the experience of all ages, and some of us from personal observation, that the disease is communicable from one individual to another."

Here the term "experience" is evidently confounded with *tradition* or *practice*; seeing that the result of the application of a doctrine, either palpably erroneous, or which had not been proved to be true, would not in a hundred thousand years amount to an iota of experience. And even thus modified, the assertion

would be still incorrect; since it has been shown that the very idea of *pestilential* contagion was unknown to the ancients, and is, in fact, a *discovery* of very modern date.—With respect to the alleged “personal observation” of some of the members of the College, as we are uninformed wherein it consists, we may, in the face of demonstration, be excused for considering it no less fanciful than “the experience” of the ancients.—Indeed we find that, even according to their own estimate, the degree of conviction produced upon the College, as the joint effect of “the consideration of the *experience* of *all* ages,” and of the “personal observation” of some of its own members, does not amount by any means to a certainty, but only to a simple persuasion: and upon this simple persuasion of the College, in the face of the most irrefragable proofs, are institutions continued, which, independently of numerous other injuries of immense magnitude, subject this nation and its dependencies to the continuance of a great pecuniary detriment annually!

3. “The additional proofs which would be required of the non-existence of contagion must be such proofs as would be sufficient to counterbalance the general opinion of medical and philosophical authors and historians from the times of Thucydides, Aristotle, and Galen, to the present day.”

Proofs to counterbalance opinion! This appears to be *prima facie* very much of the nature of nonsense. The absence of all proof of existence ought to be sufficient proof of non-existence to counterbalance the opinion in its favour, had such opinion actually prevailed, of all the persons who have existed from the

beginning of the world to the present day. But I have shown, in the work which is here the subject of collegiate animadversion, that such a doctrine could not even have been known to the ancients, as well as the æra and the object of its introduction; and the absurdity of attributing this belief to any period prior to the dark ages, has been further shown, and at greater length, in a paper entitled "Reasons for concluding that the Doctrine of Pestilential Contagion was wholly unknown to the Ancients, &c.," inserted in Nos. 110 and 111 of the "*London Medical Repository*" for February and March 1823, being volume xix.

For the sake of those who may not have an opportunity, or be disposed to take the trouble, of consulting the publications to which I have referred, I shall here state one or two facts, which they may deem sufficient proof, that the doctrine of pestilential contagion could not have been known to, and, *a fortiori*, could not have been believed by, the ancients. Hippocrates had written expressly upon epidemic diseases. Do his works mention or allude to pestilential contagion? No! not once: nor to simple contagion either; for even that was unknown to the ancients. They are both *modern discoveries*. But Thucydides? He was the contemporary of Hippocrates: one unlucky sentence of that celebrated historian, which had the misfortune to fall into the hands of the pestilential contagionists, has been unmercifully tortured, without however being made to utter the absurdities which they wished it to declare: and it is a remarkable circumstance, that this sentence should be made to speak a different language by the translators who have preceded and by those who have followed the æra of the Council of

Trent. It was a sort of God-send, like the incidents from Malta and from Zante, related in section xxxi.

It seems a surprising absurdity, not to say effrontery, to represent an historian cotemporary with Hippocrates as speaking of a medical doctrine, as a thing of course and generally received, respecting which the great father of physic himself had been wholly silent, and respecting which he could not have been silent, if it had been known, or even surmised, although not believed, in his time. In regard to this, as well as to every other part of their system, the partisans of pestilential contagion would, in their humility, arrogate to themselves the right of imposing upon their opponents the task of proving negatives. "If you do not prove that the ancients did *not* know and believe in the doctrine of pestilential contagion," say they, "we shall assume, as of right, that it was both known to and believed by them, without considering ourselves bound to adduce any specific proofs." For my part, not having studied under Prince Hohenlohe, I take leave to decline entering into any formal engagement for the performance of miracles. But whoever, without being able to produce satisfactory evidence, by more than dubious words, or mere fragments of sentences, in short, by some explicit and unequivocal declaration, shall persist in maintaining these propositions, I shall, in the quality of an uninspired investigator of sublunary facts, feel justified in considering him as affirming what he cannot but know to be wholly destitute of foundation.

Thus, the proofs required by the College have been abundantly supplied. But the truth is, that this question is not of the smallest importance; since as many

opinions as could possibly exist upon the subject might be overturned by the experiments of a single day : nor is it probably so regarded ; but is merely brought forward as a tub for the whale, to divert the attention of the public from the main question. I shall therefore not dwell any further on this part of the subject. From the wording of this sentence, who would not think that I had denied the existence of simple contagion; in those diseases of which it is unquestionably the cause?

4. "So late as the year 1813, the contagious nature of the plague was fully ascertained by the British medical officers in the island of Malta."

The "*nature*" of a disease, I may observe by the by, is wholly independent of the properties of its cause. Similar diseases may be produced by agents of dissimilar qualities. A disease is not a substance, but the condition of an organ. I dislike verbal criticism ; but in disquisitions of science, accuracy of language is essential ; and in medicine, the want of attention to it has been no less injurious than it is notorious.

"The contagious nature of the plague," then, we are told, "was fully ascertained" (not proved) at Malta in 1813. In what manner, or upon what occasion, were these contagious properties "ascertained?" Of this the College omit to inform us ; and we are left to our conjectures. Was it by feeling the pulse through a tobacco leaf, a practice that was actually enjoined, under the penalty of a long quarantine ? or by viewing patients through an opera-glass or a telescope ? or was it a deduction from the fact, that the disease did *not* spread among the soldiers, living *gregariously*, as they

do in barracks, nearly so much as among the inhabitants, who do not live *so* gregariously? or from the still more decisive fact, that the orderlies, who attended the sick soldiers, were not *in any single instance* affected? —Such are the *proofs*, according to the medical logicians of the College, of the contagious properties of plague, imported from Malta in 1813! I should be curious to know by what processes of reasoning the same conclusion has been obtained at different æras, in the course of “*the experience of all ages*.”

5. “The doctrine of contagion appears to be wholly ‘unshaken’ by any argument which Dr. Maclean has advanced.”

I suspect the College must have here meant to be sarcastic as well as correct, and that the word “unshaken” should be understood in a literal, not in a figurative sense. In this sense, it is certainly quite true, that no arguments which I have employed have *shaken* either the doctrine of *simple* contagion, or of *pestilential* contagion, for the very obvious reasons, that they could not have performed the miracle of shaking either what is immoveable, or what has no existence. Here I have the rare and unspeakable happiness of *literally* according with the College. But if my arguments have not literally *shaken* the doctrine of *pestilential* contagion, it is only because they have abundantly proved it to be incapable of being placed in a tangible shape; for evidence of which I would beg leave to refer the reader to the following sources: 1. “A Dissertation on the Source of epidemic and pestilential Diseases, showing that they never arise from Contagion, &c. Calcutta, 1796:” 2. “Suggestions for the Prevention and Mitigation

of epidemic and pestilential Diseases, comprehending the Abolition of Quarantines and Lazarettoes, &c. London, 1817 :” 3. “Results of an Investigation respecting epidemic and pestilential Diseases, including Researches in the Levant concerning the Plague. 2 vols. 8vo, London, 1817 and 1818 :” and various essays subsequently inserted from time to time in the *London Medical Repository* and other periodical publications.

6. “At the same time, we think it probable that some of the personal restrictions enforced in some of the establishments for quarantine might be modified without risk to the public safety.”

This admission on the part of the College is wholly inconsistent with all their previous conclusions. If sanitary laws, of which quarantine is a part, be efficient for their professed objects, they ought to be universally extended ; if not, they ought to be universally abolished. There is, in this case, no middle course—no compromise. If the College then be justifiable in not recommending their universal extension, they are not justifiable in not recommending their total abolition ; and if they be justifiable in not recommending their total abolition, they are not justifiable in not recommending their universal extension. Let them choose which horn of the dilemma they please ; there is no escape from censure.

7. The purport of the second Report of the College to the Privy Council, dated November 7th 1818, concerning the second volume of my work upon epidemic diseases, is, that nothing contained in it has

altered the opinion "expressed in their former Report." (I have shown in the preceding pages how much the opinion "expressed in their former Report" is worth.) Besides the notorious incompetency of the College as judges of this question, upon general grounds, I have, in my observations on their first Report, shown *seriatim* the perfect futility of every one of the reasons which they have there assigned for their opinion ; and as their second Report is but the mere expression of their adhesion to the opinion delivered in their first Report, but little further comment is necessary. In this matter at least, without consideration of their general merits, the interests of the country, and of mankind at large, demand that we should consider ourselves as absolved from all allegiance to the authority of the College. To effect the conversion of that learned body, was a task which I was not by any means visionary enough to undertake ; but only to produce sufficient materials of conviction. Respecting the validity of these materials I am now again at issue with that learned body. If they will disrobe themselves of the mantle of fancied authority ; if they will abandon the scholastic intrenchment of dogmatism untenable in these times ; if they will descend, in the face of day, into the open field of fair discussion, committing the issue of the controversy to the appropriate weapons of fact and argument, and show cause *in foro scientiæ*, why sanitary institutions, comprehending quarantine and lazarettoes, should not be every where abolished ; if, I say, they will now do all these things, or not being able to do them, if, in so important a matter, they will evince the mag-

nanimity to acknowledge error, they will merit applause ; whilst, if they act otherwise, the irreverence of the age for mere authority, when placed in opposition to reason, may induce the public wholly to disregard their opinion ; in which case they will themselves be the only losers by their non-conformity ; for surely we are not in the predicament of being obliged to abide by the authority of any collegiate body, however respectably composed, in opposition to truth and reason ; or to abstain from abolishing establishments proved to be pernicious and expensive, merely because we may not be able to obtain from such body the acknowledgement of conviction.

The reader will perhaps marvel, aware as I must have been of all these circumstances of disqualification beforehand, that I should have at all assented to a reference, which it was obvious could be productive of no immediate or direct beneficial result. The explanation is easy. The difficulties by which an inquiry of this kind, officially instituted for the first time in the history of the world, was found to be on all hands surrounded, were such that, unless I suffered it in some measure to take its course in the usual channel, there was but little probability of its proceeding at all ; whereas the agitation of the question, even in this inadequate manner, and whatever might be the conduct of the College, could not, I was persuaded, fail to be useful, if it were only by showing the weakness of their cause ; whereby we should afterwards be enabled to resume the subject with much greater advantage. This was also in conformity with the unerring principle of the utility of public discus-

sion in all matters whatsoever appertaining to science. But in order that nothing might be wanting that depended upon me, I earnestly represented both to the Privy Council and to the College of Physicians, pending the proceedings, the perfect nullity of any decision which should consist of a mere collegiate *dictum*,—of any thing short of an argumentative Report.

SECTION III.

REFUTATION OF THE REPORT OF THE SELECT COMMITTEE OF THE HOUSE OF COMMONS APPOINTED TO CONSIDER THE VALIDITY OF THE DOCTRINE OF CONTAGION IN THE PLAGUE, IN 1819.

Reason, not impossibility, may meet
Some specious object by the foe suborn'd,
And fall into deception unaware.—MILTON.

UPON expressing my dissatisfaction at the result of the reference by the Privy Council to the College of Physicians, and especially at the omission by this latter body to assign in detail the grounds of their opinion, it was agreed that a Select Committee of the House of Commons should be appointed “to consider of the validity of the doctrine of contagion in the plague” only. Thus, instead of embracing, as I proposed, the doctrine of pestilential contagion generally, the functions of the Committee were limited in a manner that, even were all other circumstances favourable, must have had the effect of leaving the inquiry incomplete. As sanitary laws equally regard all epidemic diseases supposed to be contagious, an inquiry into the validity of the doctrine of contagion in any single epidemic, however well conducted or correctly terminated, it is obvious could only have a result as one is to the whole number of known epidemics. By restricting, therefore, notwithstanding my earnest solicitations, the functions of the Committee to an inquiry into the validity of the doctrine of con-

tagion *in the plague*, to the exclusion of the fevers of Gibraltar, Spain, America, &c., as well as of the epidemics which had then for some years prevailed in England, Scotland, and Ireland, although equally objects of sanitary laws, and much more easy of investigation, it may be said that the failure of the inquiry was ensured previous to its commencement.

To this pernicious limitation, I however thought fit to assent, rather than that there should be no committee; persuaded that every fresh agitation of the question, in however inadequate a form, would, by destroying some links of the chain of delusion, bring us nearer to the point at which the effulgence of truth would become irresistible. The following is their Report.

“ The Select Committee appointed to consider the validity of the doctrine of contagion in the plague; and to report their observations thereupon, together with the minutes of the evidence taken before them, to the House; have considered the matters to them referred, and have agreed upon the following Report.

“ Your Committee being appointed to consider the validity of the received doctrines concerning the *nature of contagious and infectious* diseases, as distinguished from *other epidemics*, have proceeded to examine a number of medical gentlemen, whose practical experience or general knowledge of the subject appeared to your Committee most likely to furnish the means of acquiring the most satisfactory information. They have also had the evidence of a number of persons whose residence in infected countries, or whose commercial or official employments enabled them to

communicate information as to facts, and on the principle and efficacy of the laws of quarantine; all the opinions of the medical men whom your Committee have examined, with the exception of two, are in favour of the received doctrine, that the plague is a disease communicable by contact only, and different in that respect from epidemic fever; nor do your Committee see any thing in the rest of the evidence which they have collected, which would induce them to dissent from that opinion. It appears from some of the evidence, that the extension and virulence of the disorder is considerably modified by atmospheric influence; and a doubt has prevailed, whether under any circumstances the disease could be received and propagated in the climate of Britain. No fact whatever has been stated to show, that any instance of the disorder has occurred, or that it has ever been known to have been brought into the lazarettoes for many years: but your Committee do not think themselves warranted to infer from thence, that the disease cannot exist in England, because, in the first place, a disease, resembling in most respects the plague, is well known to have prevailed here in many periods of our history, particularly in 1665-6: and further it appears, that in many places and in climates of various nature, the plague has prevailed after intervals of very considerable duration.

“Your Committee would also observe, down to the year 1800, regulations were adopted which must have had the effect of preventing goods infected with the plague from being shipped directly to England: and they abstain from giving any opinion on the nature and application of the quarantine regulations, as not

falling within the scope of inquiry to which they have been directed: but they see no reason to question the validity of the principles on which such regulations appear to have been adopted."

"June 14, 1819."

Upon this document I shall now proceed to comment sentence by sentence.

1. "Your Committee being appointed to consider the validity of the received doctrines concerning the *nature* of *contagious* and *infectious* diseases, as distinguished from *other epidemics*, have proceeded to examine a number of medical gentlemen, whose practical experience or general knowledge of the subject appeared to your Committee most likely to furnish the means of acquiring the most satisfactory information."

Here we perceive, that, whilst the original appointment of the Committee was, in express terms, for the purpose of considering "the validity of the doctrine of contagion *in the plague*," or, in other words, the validity of the received doctrine concerning the *cause* of a *particular* malady (this limited function was kept pretty steadily in view in the examination of the witnesses), they assume, in the first sentence of their Report, powers of a very different and a much more extended kind, constituting themselves judges of "the *received* doctrines concerning the *nature*" of a *multiplicity* of maladies—"contagious and infectious diseases, as distinguished from other epidemics." Here we have three kinds of epidemics, "contagious, infectious, and other;" whilst, in nature, contagious dis-

eases are so far from being epidemics, that they may be regarded as their opposites ; and, in correct language, infectious and epidemic diseases are one and the same thing. How many varieties may be comprehended under the head of "other epidemics" we are not informed. By this preposterous deviation from the functions assigned to the Committee at their formation, they plunge, at one leap, into inextricable confusion. The jumble of doctrines which this single sentence comprehends, is altogether unintelligible. That some contagious diseases are epidemic, and others not ; that some epidemic diseases are contagious, and others not ; that some infectious diseases are epidemic, and others not ; that some epidemic diseases are infectious, and others not ; and that "contagious" and "infectious" are synonymous terms, are some of the curious inferences which it supplies. The term "infection," in its proper acceptation, and as it was understood by the ancients, means nothing else than the noxious influence of a pestilent air, in producing its appropriate sickness. It is equivalent to epidemic or pestilential influence. And the term "contagion," in its proper acceptation, means nothing else than the influence of a specific *virus*, in producing its appropriate diseases, by propagation from the sick to the healthy, or from *fomites* to persons, or through the medium of the air, *considered as a vehicle*. These distinctions are surely sufficiently intelligible to every mind, which is not saturated with the prejudices and inconsistencies of the medical schools.

Respecting the qualifications, which the Committee have attributed to the medical men whom they did examine, I may observe that, if mere opinion

or numbers are to decide, qualification can be of little value. Concerning the more immediate subject of inquiry—the plague—it happened that but very few of the witnesses had ever seen the disease; and of these few, scarcely any had seen it without the restraints of prejudices of education, preconceived notions, or sanitary police, leaving scarcely a chance for the exercise of an unbiassed judgement. The same difficulties did not, however, exist in regard to yellow fever, one of the other principal objects of sanitary laws. There were in the country, at the period of this inquiry, a great number of experienced and intelligent medical officers both of the army and navy, who must have frequently seen and treated yellow fever in Gibraltar, Spain, and the West Indies; and whose testimony might have been very easily procured. They would from analogy at least have been able to give much valuable information. After the epidemic of Gibraltar in 1814, the majority of the medical officers, who had been in that garrison during its prevalence, it is known from official returns, were convinced that it did not depend upon contagion*. Why

* At the conclusion of the epidemic fever in 1814 in Gibraltar, Mr. Frazer, surgeon-major of the garrison, proposed a series of questions to the different medical officers, relative to the origin and subsequent propagation of the disease: and the following is the result extracted from their official replies.

Surgeon Weld, 67th regiment—Not contagious.

Assist.-Surgeon Martendale, 67th regiment—Not contagious.

Surgeon Lea, 26th regiment—Not contagious.

Surgeon Short, 60th regiment—Not contagious.

Surgeon Playfair, Dillon's regiment—Not contagious.

Assistant-Surgeon of ditto—Not contagious.

Hospital-Assistant Thompson—Not contagious.

were not those officers of both opinions sought, rather than Fellows of the College of Physicians, who had so much less experience of epidemic diseases? or rather, why did they appear to have been avoided? In Spain, the instructions of the general Government to the local authorities, in relation to the fever of 1821, were "to consult and examine medical men of opposite opinions, as nearly as possible, in equal proportions."

Let us now examine the actual composition of the majority of witnesses, upon whose *opinion* the Committee, in disregard of the *facts* of the minority, profess to have founded their Report. They consisted of eight Fellows of the College of Physicians, the confidential adviser of the Privy Council in matters of quarantine, and the chief of the army medical department. In addition to the grounds stated in the last section, why

Mr. Humphreys, Royal Artillery—Not contagious.

Assistant-Surgeon Williams—Neutral.

Hospital Assistant—Neutral.

Mr. Donnet, Naval Hospital—Domestic origin, contagious in a limited degree.

Mr. Amiel—Domestic origin, contagious in a limited degree.

Assistant-Surgeon Brady—Domestic origin, contagious.

Assistant-Surgeon Foote—Domestic origin, contagious from its running through families.

Surgeon Sproule, Artillery—Neutral—Contagious.

Surgeon Barker, 11th regiment—Imported—Contagious.

Assistant-Surgeon Considini—Imported—Contagious.

Eight not contagious—two neutral—five contagious—two contagious in a limited degree: of the seven who are of opinion that the disease was contagious, four have assigned to it a domestic, two an exotic origin, and one remained neutral in this respect. The decided majority is therefore in favour of non-contagion.

the College of Physicians should, in their corporate capacity, be regarded as incompetent, because not unbiassed judges of the questions here at issue, I may state that they twice recently made adverse Reports to the Privy Council concerning the results of the author's researches in the Levant. The members of that body, I submit, cannot, in such a case, be individually regarded as impartial witnesses. Similar objections apply, with at least equal force, to the confidential adviser of the Privy Council in matters of quarantine, who is *ex officio* necessarily a believer in pestilential contagion, and has besides written a book in its support*, as well as to the chief of the army medical department, who is also an approved literary defender of this medical faith †. These ten persons, forming the majority of the medical witnesses examined by the Committee, had they otherwise all the professional merit in the world, must, as avowed partisans, be deemed to be, on these points, very exceptionable witnesses. Would persons, so circumstanced, be regarded as impartial witnesses in a court of justice, even on any ordinary trial of comparatively trivial importance, between man and man? The Committee were then assuredly mistaken in their choice of "the most likely source," to furnish the means of acquiring the most satisfactory "information;" and their error, let us hope, will serve as a beacon in future inquiries.

2. "They have also had the evidence of a number of persons whose residence in infected countries, or whose commercial or official employments,

* Observations on the Bulam Fever, &c. By W. Pym, M.D. &c.

† Medical Sketches, &c. By Sir James M'Grigor, M.D. &c.

enabled them to communicate information as to facts, and on the principle and efficacy of the laws of quarantine."

There cannot be worse evidence in general, on this subject, than that of Christian merchants, or others who have resided in the Levant; not that they have any intention to deceive, but that they are themselves deluded. Amongst the Christian inhabitants of Italy and the Levant, the doctrine of pestilential contagion, which has grown into an enormous system by the accumulated false knowledge of nearly three centuries, has long been a species of sanitary religion (if I may so express myself), and the most absurd traditions are regarded by them as substantive facts. Terror at the very sound of plague is too powerful to admit of the smallest exercise of the understanding. The mind becomes incapable of distinguishing or appreciating phænomena; and exists, as it were, but in an atmosphere of delusion. As to *facts*, upon the production of a *single* one in proof of pestilential contagion, from "the *experience* of all ages," I will cheerfully consent at once to abandon all my doctrines; and as to the "*principle*" and "*efficacy*" of the laws of quarantine, they are, like every other part of the system, perfectly *in nubibus*. All that such persons can speak of is the *practice*. They know, that when plague exists, ships sail with foul bills of health; that precautionary measures are adopted to prevent the *embarkation* of an *assumed* contagion; and that, upon the arrival at their destined ports of the ships so sailing, they are put under quarantine, to prevent the *debarkation* of this assumed *virus*. In all this there is not a single fact. The existence of contagion in the plague; the

prevention of the embarkation of that contagion by means of expurgation ; and the prevention of its debarkation by quarantine, are all implicitly taken for granted. They are all creatures of the imagination, matters of pure and unqualified fiction.

3. "All the opinions of the medical men whom your Committee have examined, with the exception of two, are in favour of the received doctrine, that the plague is a disease communicable by contact only, and different in that respect from epidemic fever."

What signify opinions? A single *fact* is worth more than a hundred thousand opinions!—We are told also of "received doctrines." But where every thing is assumption, it must be obvious, that there cannot be a received doctrine. All is necessarily arbitrary. Each witness has his particular version ; and it must be by mere chance if any two of them coincide respecting any single point of doctrine, or if any one continues to be consistent with himself for two answers successively. There is therefore here no such uniformity of evidence in favour of a precise doctrine, as the Committee have assumed ; although, if there were, it would still amount to nothing more than an uniformity of *faith*. Far from its being common to them, with the exception of two, I cannot discover, from the evidence itself, that such a doctrine as is here specified by the Committee, has been precisely set forth, and uniformly maintained, by any one of the witnesses. If it had, indeed, it would have very widely differed from the "received doctrine" of the earlier contagionists, whilst the system was yet in the infancy of absurdity, that the plague is communicable by persons ; by *fomites*,

as clothes, goods, and merchandize; and by the air, *considered as a vehicle*. But if the uniformity, instead of being quite wanting, had been complete, it would have been nothing to the purpose; since we are inquiring, not what is the “*received doctrine*,” but the *true* one. In illustration of the manner in which the doctrine of pestilential contagion is supported, on the one hand, by mere fables or absurd traditions; and refuted, on the other hand, by incontrovertible facts, I shall here state part of the evidence of the confidential adviser of the Privy Council in matters of quarantine in its favour, and of my own against it. Dr. Pym is asked, (Minutes of Evidence, p. 56,)

“Do you give your opinion on the contagious nature of the plague from your own knowledge, drawn from your own observations?—No, not from my own observations; I never saw it.*

“From whence?—From general information; from reading, and from *facts* communicated to me by individuals who had seen the disease in Egypt, at Malta, and other places. I know one instance of the plague having been communicated at sea: some French gunboats were taken by a man of war; they were ordered

* In August 1814, a large quantity of skins imported in the *Lucy* from Smyrna, were burnt by order of Doctor Pym, (*who had never seen the plague*,) upon a Report made to the Privy Council from the Consul at Smyrna, that the persons who were employed in removing and packing the said skins, had died of the plague. (p. 102, Appendix to the Report of the Select Committee on the Contagion of the Plague.) If all the Levant goods so circumstanced were burnt, how much would come to market? What a system! It will be surprising, if, at no very distant period, its upholders should be able to look each other in the face without bursting into laughter.

alongside, and while lying there, the person ordered on board to issue provisions &c. received the infection of the plague.

“ Name the ship ?—The Theseus.

“ What year was it ?—In the year 1800.

“ In what part of the world ?—Off the coast of Egypt.

“ *Dr. Robert Tainsh called in and examined.*

“ You were surgeon of the Theseus, I believe, in the Mediterranean, at the siege of Acre ?—Yes, I was.

“ In what year was that ?—It was in the years 1798 and 1799.

“ Did you see any cases of plague whilst there ?—Yes.

“ How many cases of plague did you see ?—I saw five cases of plague.

“ Were they on board the Theseus ?—Yes.

“ What countrymen were the persons infected ?—There were three Englishmen and two Frenchmen.

“ Did they belong to your ship ?—The three Englishmen had belonged to the Theseus formerly, and they had been taken in one of our gun-boats.—They all appeared infected by the disease.

“ In what state of the disease were they ; had they buboes ?—Only one of them had it of any great consequence. The other four were *petechial* slight cases. They were in a state of convalescence, and had rather the remains of disease than any thing else. One of the Frenchmen, however, had buboes, and in a state of suppuration.

“ Did that Frenchman recover ?—Yes.

“ After what lapse of time ?—In about three weeks or a month. Both the Frenchmen were sent on shore.

“ But was there any communication of the plague to any other persons on board the Theseus ?—No.

“Were there any means of separating these plague patients from the rest of the crew?—Certainly; all of them were removed into one birth on the starboard side of the ship, called the sick bay. Every part of their clothes that were on them, on their coming on board, were immediately taken off and thrown over-board by my orders. Their bodies were shaved, and no hair left on them that could lodge moisture. They were then washed with soap and warm water, and new clothes were given to them: they had new bedding, new shirts, and every thing new within ten minutes after they came on board.

“Who washed them?—One man whom I persuaded so to do, by handling the patients myself, and applying the poultices to the buboes.

“Had you communication with the ship’s crew at the same time?—Yes. I examined them every morning to see whether they had caught any infection; but none of them had.

“Did the man, who attended these patients, mix with the crew?—He communicated generally with the crew of the ship.

“What was your object in destroying their clothing in which they came a-board?—It was a mere caution to prevent those clothes from being again used. It was on account of no particular theory, but merely for cleanliness.

“It did not arise, then, from the belief that it was of itself contagious?—No; and, my hands being so much engaged with the knife at that time, I had not much opportunity of studying the disorder.

“Did you touch the man who was so badly affected?—Yes; I applied his poultices.

“ Did the same man attend upon him who had shaved him ?—No ; the barber of the ship shaved him ; and the only precaution used was, when the attendants came out of the sick bay, I made them immerge their hands in a bucket of vinegar !

“ Do you suppose they always did that ?—They were ordered to do so, and a sentry was placed there to oblige them so to do.

How near was the sentry to them ?—He was on the opposite side of the ship, the sick bay generally taking in half the galley.”—*Min. of Evid.* p. 66.

This evidence is important, as being singularly illustrative of the nature of the fables upon which the doctrine of pestilential contagion has been founded, and continues to be maintained. To investigate the merits of such traditions separately, I hold to be not only idle, but injurious, by giving them an adventitious importance ; since, the impossibility of the existence of pestilential contagion being demonstrated, all narratives pointing to an opposite conclusion must necessarily be fallacious. Every reader is able to judge for himself, whether the Theseus here mentioned by Dr. Pym and by Dr. Tainsh, be one and the same ship ; whether the time and place be the same ; and whether the French sailors be the same : as well as to form a correct opinion of the degree of credit which is due to the history that has been related to Dr. Pym, and by him detailed from hearsay to the Committee, so different from the real events as stated by Dr. Tainsh, who was surgeon of the ship at the time, and himself not only an eye witness, but the principal actor !

The following series of incontrovertible facts, ex-

tracted from my own evidence, each of which is more powerful than all the opinions that can be collected together, and the whole irresistible, will form a striking contrast with that just quoted of the confidential adviser of the Privy Council in matters of quarantine; and will also serve as a sufficient commentary on this article of the Report.

“ The instances of plague affecting individuals, without the disease being propagated, which came under my immediate observation whilst at the pest-hospital near the Seven Towers, are remarkable, and in my opinion conclusive of the question. Three successive priests, the purveyor, the interpreter, and all the attendants on the sick; several persons who were in the hospital for sore legs, or other local ailments; and some poor women and children in health, who were there upon charity, amounting in all to about twenty persons, were not, in any single instance, affected with the disease, although there was a constant succession of pestilential patients; and although a great proportion of the persons mentioned were *ex officio* necessarily in frequent contact with the sick; and many of the others slept in the same apartments with them. The purveyor, or some of the servants, went of course daily to the bazaars or markets, to purchase provisions, and to dispose of the clothes or other property of the dead, and without using any precautions, or occasioning any alarm. I have myself, with the interpreter, repeatedly walked into that part of Constantinople, which leads to the Golden gate, in the vicinity of the Seven Towers, several times even during my illness, and entered coffee-houses, or traversed chaans and bazaars in the body of the town, frequent-

ly in collision with the passing multitudes ; assured that there was no danger of my communicating the disease to any one, either directly in consequence of my own malady, or indirectly from the patients ; and finding that no apprehension of such a danger was entertained by the inhabitants of that quarter (being chiefly Mahommedans), although they must have been generally aware that we came from the Greek pest-house, there being no other persons in the Frank dress, or but very rarely to be seen in that part of the town. But neither from this communication, nor from the constant transfer of the clothes of the dead, was any malady propagated ; for this obvious reason, that, although the cases which did occur, were in general of sufficient intensity to prove fatal, the epidemic constitution of the air did not prevail so uniformly, or to such a degree, as to render its effects liable to be confounded with those of a specific contagion. To the reasons which I have already assigned, for considering epidemic and pestilential diseases as never depending upon contagion, I beg to add the following :—1. Generally, because the laws of epidemic and those of contagious diseases, as I stated in my work upon the subject, are not only different but incompatible ; and because pestilences observe exclusively the laws of epidemics, of which they are but the higher degrees. 2. Because no adequate proof has ever, in any single instance, been adduced, of the existence of contagion in pestilence ; from its first promulgation to the present day, the doctrine has been nothing more than a series of gratuitous assumptions. 3. Because had pestilential diseases been contagious, consequences must have followed which

have not taken place; being capable of affecting the same persons repeatedly, they would never cease, where no precautions are employed (and in such case no precaution could avail), until communities were extinguished: Turkey would long ago have been a desert. 4. Because phænomena now take place, which, if pestilences were contagious, could not happen; instead of the laws of epidemic, they would observe only those of contagious diseases. 5. Because a superabundance of irrefragable proof has been adduced, showing that pestilence never arises from contagion; and because the assumption resorted to, in order to elude this proof, that “to the effect of contagion, a particular state of the atmosphere is necessary to produce the disease,” is only in other words an acknowledgement, that a particular state of the atmosphere is its real cause. 6. Because for centuries before any intercourse, direct or indirect, was established between this country and the Levant, or rather as far back as history extends, pestilence was at least as frequent in England as in the 16th and 17th centuries, when our commercial intercourse with Turkey was considerable. 7. Because, when the free states of Italy traded both with the Levant and with the North of Europe; when they were the carriers, not only of the merchandize, but of the troops of the principal powers of Christendom engaged in the crusades; and when they possessed Smyrna, Cyprus, Candia, Scio, Cephalonia, Caffa, and even Pera, a suburb of Constantinople, no apprehension was then entertained, under a constant intercourse, of pestilence being propagated by contagion, nor any precautions adopted by any nation for the prevention of such

a calamity. 8. Because during the century and a half which has elapsed since 1665, and in which there has been no plague in England, our commerce and intercourse with the Levant have been more extensive and more rapid than at any former period. 9. Because there is no reason to believe that in modern times pestilences have undergone any revolution, in respect either to their nature or to their causes, further than may depend upon the advancement or retrogradation of countries respectively, in cultivation, civilization, and the arts of life, or upon an alteration in the seasons. 10. Because, as contagion, where it does exist, is sufficiently palpable, (it did not require the evidence of inoculation to show that small-pox depends always upon that source, and never upon any other,) if it were the cause of pestilence, its existence could not, for thousands of years, have remained concealed; it must have been discovered, and demonstrated to the satisfaction of the world, by the ancient physicians, and could not now have been a subject of controversy among their successors. 11. Because no person has, at any period of history, been known to arrive in England, from the Levant, labouring under pestilence. 12. Because no person, employed in purifying goods in the lazarettoes of England or of Malta, has ever been known to be affected with pestilence, which could not have happened if contagion had existed in the goods; and because such goods could not be uniformly exempt from contagion in particular countries, if that were the cause of plague: if, in other countries, expurgators of goods in lazarettoes have been known to be affected, it must have been from other causes. 13. Because, after three hundred thousand deaths

from plague have happened in one season in Grand Cairo, two hundred thousand in Constantinople, and one hundred thousand in Smyrna, as we are told has repeatedly occurred in those places, and the clothes of the dead have been worn by their surviving relatives, or sold in the bazaars, and worn by the purchasers, the disease, instead of spreading wider and wider, as would inevitably have happened if contagion were its cause, (since in that case it could not fail to be carried in the clothes,) has on the contrary, regularly declined and ceased at the usual periods. 14. Because, in those countries in which the plague is supposed to be introduced by means of contagion conveyed by travellers or goods, as Egypt, Asia Minor, and Syria, it never occurs epidemically, but at particular seasons; although in the other seasons, travellers and goods from places in which the disease prevails, continue equally to arrive. And 15. Because in other countries, as Persia, which maintain a similar uninterrupted intercourse with places liable to frequent attacks of plague, that disease never occurs.”—(*Min. of Evid.* p. 95—97.) If plague were contagious, it would be quite impossible that it should not be frequently carried, could communities survive such processes, to Persia and to Hindostan, by means of the merchandize of Egypt and other parts of the Ottoman dominions. How absurd is it to suppose, that a contagion could be carried to Moscow, and not to Ispahan, which is a shorter distance from some of the chief seats of pestilence! “Mais on ne finirait pas, si on voulait ramasser toutes les contradictions où le système de la contagion a engagé ceux qui le soutiennent.”—*Senac.*

4. "Nor do your Committee see any thing in the rest of the evidence they have collected, which would induce them to dissent from that opinion."

The *opinions* of the majority having been preferred to the *facts* of the minority, in the case of the medical witnesses examined by the Committee, it was not to be expected that the same thing would not happen with respect to the non-medical witnesses. We are therefore not surprised to find, that more weight was attributed to the common and contradictory traditions of the Levant, detailed by the bulk of these witnesses, than to the following striking, clear, and convincing narrative of facts, related by a member of the House of Commons, who had served in Egypt, with the armies, and consequently spoke from personal knowledge :

Sir Robert Wilson, a member of the House, called in and examined.

While in Egypt with the army, have you seen any cases of plague there?—Many; and if you will allow me, I will state the result of my observations. The army that invaded Egypt was divided into two corps; one was stationed at Alexandria, and the other moved on against Cairo; a part of the army which remained stationary at Alexandria had a detachment at Aboukir, where the preceding year many thousand Turks had been put to death in consequence of a defeat in an action with the French (and where several hundred British and French had recently been interred); every precaution was taken to prevent the introduction of plague into that part of the army which blockaded Alexandria, and was stationed at Aboukir; and from

particular local circumstances, all communication with the country was successfully intercepted, except under authorized regulations; notwithstanding which precautions, plague broke out three distinct times, beginning amongst the troops occupying Aboukir, and extending to those stationed before Alexandria. That part of the army, Turkish and British, which moved against Cairo, passed through the country, where numerous villages were infected with the plague; and during the march the soldiers had constant communication with the inhabitants of those infected villages. At Menoof, where the plague had raged with the greatest violence, a bakery was necessarily established for the use of the army; but none of the persons who attended that bakery were infected with the plague. At Rahmanich there was a lazarette or plague hospital; several men were lying infected with the plague, and many were brought out already dead; others were dying in the environs of the town of the same disorder; the Turks stripped the bodies of all indiscriminately, of their clothing, and there was no restraint whatsoever in the communication with the inhabitants, who had also free access to the camps, yet no plague was communicated to the troops. The city of Cairo had lost a great many inhabitants the same year by the plague. When the army arrived at Cairo and united with the Grand Vizier's army, many of the graves in which the inhabitants had been buried, who had died of the plague, were opened, and the bodies stripped of their clothing, with which the Turks covered themselves; and yet no soldier of either the British or Turkish armies was infected with the plague. The disorder ceased between the 17th and

24th of June, at the precise time when its cessation had been anticipated, and assured by the inhabitants, except at Aboukir, where it continued to exist some time longer. It was also affirmed to us by the French officers, that, although the plague had raged in Cairo, that year, with very great violence, and carried off some of the French army; yet, notwithstanding a constant communication was held between the garrison stationed in the citadel, and the inhabitants of the town, the soldiers in the citadel were not affected in any one instance with the disorder; many thousands of the inhabitants of Lower Egypt had died that year of the plague. The Indian army, passing through Upper Egypt, had traversed a country, in which about sixty thousand inhabitants were said to have perished, whole villages having been destroyed; but yet the troops of that army brought no infection with them, nor were any precautions adopted to prevent contagion on their junction with the British European army. To these circumstances I was myself an eye witness. I would wish also to state that, as we moved through the country, the inhabitants pointed out to us particular villages that were infected with plague, and which plague did not extend out of those particular villages to any of the contiguous villages, although there was no precaution whatever used as to the communication with the inhabitants of the infected villages. Conversing with Dr. Desegnettes, the chief physician of the French army, and M. Assilini, the head surgeon of the French army, they assured me, that whenever a battalion infected with the plague had been marched out of the infected place, the soldiers recovered and never conveyed the infec-

tion to other garrisons ; and that troops, marching into that infected garrison which had been vacated, did not become themselves infected, unless they remained there longer than eight or ten days ; and M. Assilini further assured me, that several French officers and soldiers, who had the plague, having removed themselves, or been removed, when sick of the plague, into other places, they had almost always recovered : but he said, his great difficulty was in persuading people to make the exertion of movement, for they were generally so enervated, that they preferred to remain where they were and meet their fate.

“ You have stated that the French officers thought their garrison at Cairo had never been infected that year in the citadel ; are you aware that they took any precautions to prevent it ?—I know there were none taken ; the citadel contained a very small portion of the garrison, perhaps only twelve hundred men. There was an army in the city (including followers) of near thirty thousand ; and the communication of the soldiers of the garrison with those in the town was constant. Some of the French soldiers in the city died ; but the French soldiers themselves felt a perfect confidence, provided they did not remain stationary in any garrison in which the plague raged. What makes the phænomena of this disorder more remarkable, is, that the villages are insulated and built on parallel lines, not more than 500 yards asunder ; and though six or seven of those villages in one district may be affected with the plague, and though the inhabitants of those infected villages constantly pass through villages not infected, on their route to the Nile ; yet, though there is such a daily

traverse and communication, the infection will remain in the villages where it broke out, and not extend infection through the district." (*Minutes of Evidence*, p. 69—71.)

5. "It appears from some of the evidence, that the extension and virulence of the disorder are considerably modified by atmospheric influence; and a doubt has prevailed, whether, under any circumstance, the disease could be received and propagated in the climate of Britain."

It is quite certain not only that the "extension and virulence of the disorder are considerably modified," but that the disease, whether in its mild or virulent, its circumscribed or diffused state, is entirely dependent upon atmospheric influence, or vicissitudes of temperature, as its principal or efficient cause; a phænomenon wholly incompatible with the existence of a specific *virus* as any part of that cause. The intended meaning of the second part of this article I am not certain that I understand. If it be, that plague can never be received and propagated *by contagion*, in Britain, it is certainly quite correct; but it is not more true of Britain, than of any other country, since it can no where be so introduced or propagated. If, on the other hand, it be meant, that the alleged incapability of being received and propagated depends on the atmosphere, it cannot be more true of Britain than of other countries similarly situated in respect to cultivation and improvement, and to liability to atmospheric vicissitudes. The disease has been reproduced in Malta, after an absence of 140 years; and may be reproduced in England after a similar or a longer ab-

sence. But if it were contagious, and if its existence were compatible with that of human communities, it would constantly prevail in every country, having constant communication with that which is its head quarters; for no season could pass, without every place of any considerable commerce receiving cargoes, of which portions had been manufactured or handled by persons labouring under plague. Quarantine could not prevent its being so introduced in goods, or its affecting persons in the lazarettoes. But it is in evidence that in the lazarettoes of England no person has ever been affected with plague; a fact which alone demonstrates sufficiently that its prevalence at former periods in this country has depended not upon contagious properties.

6. "No fact whatever has been stated to show that any instance of the disorder has occurred, or that it has ever been known to have been brought into the lazarettoes for many years."

From the evidence of official Reports, of a nature not liable to doubt, it results that no case of plague has *ever* occurred in any of the lazarettoes of England; a circumstance wholly incompatible with the existence of contagion in that disease, and alone sufficient not only to have authorized, but to have required the Committee to pronounce quarantine, in respect to plague, to have no object in England. Such a recommendation in respect to England, would have been fully warranted by such evidence, even had it been proved, that in the *Levant* the plague was actually contagious.

7. "But your Committee do not think themselves warranted to infer from thence, that the

disease cannot exist in England ; because, in the first place, a disease, resembling in most respects the plague, is well known to have prevailed here in many periods of our history, particularly in 1665-6 ; and further, it appears that in many places, and in climates of various nature, the plague has prevailed after intervals of very considerable duration."

These observations, whilst they are perfectly correct, are however nothing but truisms ; but they are at the same time rather inconsistent with article 5,—an inconsistency which necessarily arises from the nature of the subject. The doctrine of pestilential contagion is, indeed, composed of nothing but contradictions throughout ; and it is not unaptly represented by a Report consisting of such a jumble of incongruities. But although it would be wrong to infer that the disease cannot exist in England, we are however warranted in concluding that it is not likely that it should, in future, occur nearly as often as it has formerly done ; the situation of this country having, in respect to the efficient causes of plague, as we shall see when we come to that part of our subject, considerably improved within the last century and a half. The plague, as it used to appear in England, was essentially the same with the plague of the Levant, as the typhus of one country is essentially the same with that of another.

- 8. " Your Committee would also observe, down to the year 1800, regulations were adopted, which must have had the effect of preventing goods infected with the plague, from being shipped directly for Britain."

Nothing in nature can be more absurd, than the

idea, that any precautions, which have been taken, or could possibly be taken, would be sufficient to prevent the shipping of a contagious *virus* by goods, except the idea of its being prevented from landing by quarantine. It would infallibly be introduced by every ship from the Levant, not only into the lazarettoes, but into every shop or warehouse which might receive any part of her cargo. The wonder is, that such things could ever have been imagined possible by men in their senses ; but the doctrine of pestilential contagion, when once adopted, appears to bewilder the understanding. In 1814, when part of the cargo of the *Lucy* was burnt, by order of Dr. Pym, had any individuals of the crew been affected with the plague ?—Not one.—And could this have happened had contagion existed in the cargo, which they had assisted to stow and to unstow ?—In 1721, the ships *Turkey Merchant* and *Bristol*, with their cargoes, were taken from Stangate Creek out to sea, and burnt, in pursuance of an order in Council, dated the 28th July 1721. In 1792, a chest of goods was burnt, imported in the *St. George* from Zante. In 1800, the ships *Aurora*, *Mentor*, and *Lark*, from Mogadore, were destroyed, with their cargoes, pursuant to an order in Council of the 7th January 1800, (grounded upon a representation of the Committee, consisting of His Majesty's physician and others,) great *suspicion* being entertained of the same being infected with the plague. The master of the *Lark* died at Mogadore, where the disease was raging at the time the vessel sailed ; and it was reported that nearly all the persons who assisted in loading the ships also died of the plague. (Report, App. p. 101.) All this account of deaths at Mogadore

might be very true. But did any one die, or had any one been ill of the plague in any of those vessels, at the time of their arrival in England?—Not one! Such a circumstance has never been known to happen. What folly, then, nay, what madness, thus to destroy property on account of a chimera! Since the regulations alluded to have been altered, and goods have been shipped directly for England, no cases of plague have occurred in the lazarettoes; and if the whole of the sanitary laws were abolished, there would not be one pestilence the more, nor any single case the more of any pestilential malady; but, on the contrary, such epidemics as might occur would be many times milder, and less diffused.

9. “And they abstain from giving any opinion on the nature and application of the quarantine regulations, as not falling within the scope of inquiry to which they have been directed.”

This declaration appears extraordinary. I cannot conceive what practical object the appointment of such a Committee could serve, unless they were to inquire into the consequences as well as the validity of the doctrine of contagion, in the plague; for even if that doctrine had been proved to be correct, sanitary laws would not necessarily have been efficient for their proposed ends, and might be discovered to be in many respects highly injurious to the best interests of communities. If the doctrine had been proved to be wholly incorrect, the total abolition of these laws would have been a necessary consequence; and if partially incorrect, their modification, or partial abolition, would be indicated. Thus it is evident, not only that the nature and application of the quarantine regulations did fall pro-

perly within the scope of inquiry of the Committee; but that they were precisely what ought to have constituted the principal objects of that inquiry.

10. "But they see no reason to question the validity of the principles on which such regulations appear to have been adopted."

By the uniform silence of history, in that case forming the best evidence; by the testimony of almost all the witnesses examined before the Committee; and even by official Custom-house returns, it stands confirmed, that, in the memory of man, not a single person has arrived in this country ill of the plague; and that not a single case of that disease has ever occurred among the expurgators of goods in the lazarettoes. The Levant Company, in their printed orders to their factories abroad, assert, that the plague was never brought to England by means of their commerce. Sir James Porter (Obs. on the Turks, p. 41.) asserts, without limitation to the Company's establishments, that the plague was never brought to these kingdoms immediately from Turkey. The Custom-house returns presented to the Committee are as follows: "*Rochester*: There is not any record of a case of absolute plague in any lazaretto at this port having occurred, from the earliest period that can be traced to the present time. *Portsmouth*: It cannot be ascertained that any case of absolute plague has ever occurred at this port, on board any lazaretto. *Falmouth*: The officers at this port are not aware that any case of what is usually called plague has occurred. *Milford*: No case of absolute plague has occurred at this port. *Bristol*: No instance is on record of absolute plague having occurred at this port from 1619 to the present time. *Liverpool*:

The officers at this port have not any knowledge of the plague having had existence in any lazaretto or other vessel there. *Hull*: The officers at this port cannot find recorded in their books a case of absolute plague in any lazaretto, during the last 200 years.”—Yet, with all this evidence staring them in the face, the Committee “see no reason to question the validity of the principles upon which such regulations appear to have been adopted.”

The eulogium in this article appears very inconsistent with the profession in the preceding one. And it is still more extraordinary that the unqualified, although indirect approbation here conveyed, of the laws of quarantine, should have been expressed by the Committee, not only in opposition to the declared opinion of the College of Physicians, in their collegiate capacity, but individually of almost all the medical witnesses examined by the Committee, who gave any opinion at all upon the subject. The former had stated, that “the personal restrictions might probably be modified without risk to the public safety ;” and the latter, when they did give an opinion, were almost all equally favourable to some sort of mitigation. Thus, it was only when any abatement of the severity of sanitary laws was recommended by the College, or by a majority of other medical witnesses, that their authority was disregarded.

SECTION IV.

MUCH TIME LOST AND GREAT PUBLIC INJURY SUSTAINED BY CONSIDERING THE PRECEDING REPORTS AS CONCLUSIVE OF THE QUESTION OF PESTILENTIAL CONTAGION, AND THE MERITS OF SANITARY LAWS.
—COURSE RECOMMENDED TO BE NOW PURSUED.

“The inquiry, instead of being discontinued, should have been prosecuted with increased ardour, and without intermission, until it had been ascertained whether sanitary laws ought to be universally abolished as an evil, or universally extended as a benefit, to mankind.” p. 108.

THUS terminated, without any direct beneficial results, the first official inquiry that has ever been instituted, even partially, into the validity of the doctrine of pestilential contagion, and the efficiency of sanitary laws for their proposed ends. Its indirect advantages, however, are likely to prove great and lasting, and have already exceeded even my most sanguine expectations; it has served, together with my subsequent expositions, to place in full view before the public, the utter futility of the grounds upon which the College of Physicians have, on this occasion, endeavoured to uphold a system, which, besides numerous other injuries, occasions a great pecuniary detriment annually to this country, and is an indelible disgrace to science and to civilization. The whole of that ground consists, as we have seen, in one miserable subterfuge, and one unfounded allegation, which, had it even been true, would have been nothing to the purpose. The amount of the reasoning of the Col-

lege is explicitly this:—"Assuming that you have *not* proved the non-existence of contagion in the plague; we therefore *assume* its *existence*: *assuming* that you have *not* proved that the ancients were *unacquainted* with the doctrine of pestilential contagion; we *therefore* assume that they were *believers* in it: we further *assume* that all the *real facts*, which you have adduced, are insufficient to counterbalance this *assumed opinion* of the ancients: and finally, we take the privilege to assume the right of dispensing with the trouble of adducing any *fact* or *argument* in support of any one of these *assumptions*." I defy the College to prove, that this is not a correct representation of the substance of the Reports of that body to the Privy Council, concerning my work upon epidemic diseases. In withholding from me a knowledge of the precise terms of these Reports, which I did not see until they appeared the following year in the Appendix to the Report of the Committee of the House of Commons on the validity of the doctrine of contagion in the plague, the Lords of His Majesty's most Honourable Privy Council must, I presume, have been actuated by compassion for that learned body, on account of the humiliation which they had foreseen would be the consequence of giving publicity to a tissue of such extraordinary and unfounded allegations as these documents contained. If the College had attentively perused and fully understood the work upon which they were called to give judgement, it is difficult to conceive how they could have failed to be convinced, that it contained the very best proof that could have been given of the negative of any question, by demonstrating the impossibility of the affirmative;

nor is it less difficult to comprehend, upon what principle they could have assumed that my failure, had I failed, to prove the negative, would have entitled themselves to take for granted the affirmative: all these things to the ordinary reader must appear nearly as incomprehensible as the doctrine of pestilential contagion itself.

There is another subterfuge much employed by the advocates of pestilential contagion *out of doors*, which the College have either overlooked, or were ashamed to use upon this occasion. Under the obvious impossibility of reconciling the existence of pestilential contagion with the acknowledged influence of the seasons upon epidemic diseases, they have invested this imaginary *virus* with properties quite different from those of any *known* contagion, assuming its resuscitation, activity, decline, and disappearance, to depend on certain conditions of the atmosphere. According to this view of the subject, there being causes sufficient without it, what occasion is there to introduce the instrumentality of contagion at all? would it not be much less unphilosophical at once to conclude, that the commencement, spreading, abatement, and cessation of epidemic and pestilential diseases, depend, as their efficient cause, upon the states of the atmosphere? for that must assuredly be deemed to be the efficient cause of any phænomenon, without which that phænomenon does not happen.

The Committee of the House of Commons, as has been observed, formed their decision concerning the validity of the doctrine of contagion in the plague, and the efficiency of sanitary laws for their proposed ends, upon the alleged opinion of a majority of the

medical witnesses examined by them, consisting of Fellows of the College of Physicians and others, who, from having repeatedly committed themselves in favour of that doctrine, could not be deemed to be unbiassed witnesses; the mere opinion of the majority so constituted was followed, and the incontrovertible facts of the minority disregarded.

As, however, neither the Committee of the House of Commons, nor the College of Physicians, had, in their Reports, ventured to affirm that the existence of pestilential contagion, or the efficiency of sanitary laws for their proposed ends, had been *proved*, but merely that the contrary had *not* been proved, it followed that these points must have been regarded by themselves as still undecided, and further inquiry, if the subject be at all worthy of investigation, as indispensable upon their own principles.

Under these circumstances, it became my duty to consider what was best to be done in order to accelerate the general application of my discoveries. The invalidity of the doctrine of pestilential contagion, and the perniciousness of sanitary laws, being, in fact, demonstrated, although the principle remained officially unacknowledged, and practically unapplied, further investigation, in respect to these points, I considered wholly unnecessary towards elucidation. But, as further experiments might tend to spread conviction, and might be deemed essential by others, I was perfectly willing, and even desirous, to engage in the undertaking. The consideration of the matter had now again reverted to the offices of Government; and I could have no reason to doubt, that the Lords of the Committee of Privy Council for Trade, to whose depart-

ment the subject was deemed more especially to belong, would see, in the Reports of the Committee of the House of Commons and of the College of Physicians, additional motives for now acceding to a former request of the Levant Company upon the same subject, thus expressed in an official letter from the Deputy Governor of that body : —

*Mr. Bosanquet to the Governor Lord Grenville,
dated 25th June, 1818.*

“ The Court, my Lord, have given this most interesting subject all the consideration of which they are capable ; and, without entering into the discussion of inferences, which may depend exclusively upon medical science, they entirely concur in opinion with your Lordship, that enough has been done by Dr. Maclean to call irresistibly for the fullest and most minute investigation ; and therefore I request your Lordship, as Governor of the Company, to lay the subject, which is truly national, in such manner as your Lordship may think proper, before His Royal Highness the Prince Regent in council, for His Royal Highness's most gracious consideration. And to pray, that Dr. Maclean, who has shown himself to be singularly qualified for the perilous undertaking, may be enabled, at the public expense, to renew his experiments for demonstrating the real character of the plague,” &c.

I accordingly again addressed the Board of Trade, offering, if further materials of conviction were deemed wanting, to continue to prosecute my experiments concerning epidemic and pestilential diseases, at the public expense ; to which proposition I received the following answer, in a letter dated July 29, 1819 :

— “ With respect to the prosecution of your inquiries at the public expense, as proposed by you in a former communication, the Lords of this Committee have only to say, that, after the decided opinion expressed by the House of Commons, founded upon a long and laborious investigation, and in exact conformity with the sentiments previously expressed by the College of Physicians, they do not feel that they should be justified in laying a charge of such a description on the public purse.”

To the validity of this reason I did by no means assent. Let us suppose “ the opinion expressed by the Committee of the House of Commons, founded on a long and laborious investigation, and in exact conformity with the sentiments previously expressed by the College of Physicians,” to have rested on evidence only liable to doubt. Would it not have been perfectly justifiable, in such a case, to have laid the charge of one, five, or even ten thousand pounds, annually upon the public purse, for a short space of time, if that had been necessary, if it were only for the purpose of satisfying the public that the immense detriment to which the country remained permanently exposed, in consequence of opinions and sentiments that, at the best, could still only be regarded as doubtful, was an indispensable evil? Nay, even on the bare possibility that a system, which was confessedly so extensively mischievous, might also prove to be wholly inefficient for its proposed ends, ought it not to have been regarded an imperative duty to have incurred a reasonable expenditure, on the chance of obtaining a conviction, by which its amount would be reimbursed a thousand fold, even in one year? Has

it not been thought justifiable to expend sums much more considerable than would have been sufficient for this purpose, on expeditions to ascertain the existence of a north-west passage into the Pacific Ocean, of which the failure was scarcely doubtful, and of which the success would not, in all probability, be attended with any equivalent advantage ?

Such arguments ought to have been conclusive in favour of further investigation at the period of the Reports in question. An injury to the amount of four years' burden of sanitary establishments, and all their consequent or concomitant evils, has been since incurred, and no fresh inquiry has taken place. Now, however, that these Reports are demonstrated to be, in every part, futile, irrelevant, or erroneous, to be, in even the most minute point or circumstance, devoid of all foundation ; after my original conclusions, which formed the subject of them, have been further illustrated, strengthened, or confirmed, by the additional elucidation, investigation, and research of the intervening years ; and after the formal decision of the legislature of a foreign country, hitherto deemed to be of all others the most prejudiced in matters of this sort, has borne unequivocal testimony to their conviction of the entire nullity of the opposite evidence ; — may we not reasonably expect that that branch of this Government, to which cognizance of such matters belongs, will think it necessary to take immediate measures for the revision of the subject of pestilential contagion and sanitary laws, in such manner as to ensure for it the strictest impartiality, and the most rigid examination ?

Deeming the invalidity of the doctrine of pestilential contagion, and the inefficiency of sanitary laws

for their proposed ends, together with the many highly pernicious consequences of the belief in that doctrine, and of the operation of these laws, to be here demonstrated as efficiently, although of course not in the same forms, nor with the same brevity, as any of the propositions of Euclid, I should hold further experimental inquiry, previous to an examination of what has been already effected in respect to these particular questions, to be not only unnecessary, but injurious ; unnecessary, inasmuch as, demonstration existing, no length or repetition of inquiry would carry proof further ; and injurious, in as much as the delay, which such a course would occasion, would prolong to an uncertain period the mischiefs which this extraordinary system has entailed upon mankind ; or if placed in unskilful, inexperienced, or treacherous hands, the investigation might wholly fail for the time, and the final decision, instead of being accelerated, be indefinitely retarded.

Thus it is manifest, that as neither the existence of pestilential contagion, nor the efficiency of sanitary laws, (for they are distinct and independent questions,) could have been considered as decided by any thing contained in the Report of the Select Committee of the House of Commons in 1819, on the validity of the doctrine of contagion in the plague, or in those of the College of Physicians to the Privy Council, in 1818, concerning my work upon epidemic diseases ; the inquiry, instead of being discontinued, should have been prosecuted with increased ardour, and without intermission, until it had been ascertained whether sanitary laws ought to be universally abolished as an evil, or universally extended as a benefit to mankind. This object I have the happiness to be assured that I have

been so fortunate as to accomplish, by my individual exertions in the quality of a volunteer: and, in order that Governments may feel warranted in proceeding to the application of my principles, by the immediate removal of this fertile source of human calamity, I do not conceive that any thing more can be necessary than to submit the contents of these pages, which have nothing abstruse or mysterious, to the judgement of any competent and unbiassed tribunal.

Should a parliamentary inquiry be resorted to, I am of opinion it would be expedient, for the more effectual elicitation of truth, that it should be conducted by a Committee of the House of Lords, where the witnesses are examined upon oath.

SECTION V.

PROCEEDINGS IN SPAIN UP TO THE PERIOD OF THE
AUTHOR'S ARRIVAL IN CATALONIA.

“ Esta enfermedad de Barcelona se hizo celebre en toda Europa y dara motivo a grandes discusiones medicas.”

SUC. REL. DEL AYUNT^o. CONSTIT. p. 132.

THE fever of Barcelona in 1821 presented a favourable opportunity of explaining to the Government of Spain, to whom, from the recentness of free discussion in that country, such investigations were necessarily new, the true nature of sanitary laws, their objects and effects. It was of essential importance to that nation especially, among whom epidemics in the form of pestilence so frequently occur, to be informed that of all the calamities incidental to these diseases in Christian communities, a very great proportion, perhaps nineteen parts in twenty of the whole, are occasioned by the very measures which are by law employed to avert them. For that purpose, I was desirous, when the epidemic of Barcelona had arrived at its height, giving promise of duration to the latest usual period of the pestilential season, of proceeding to the peninsula, with the view of communicating to the Cortes and Government the fruits of my previous experiments and researches upon that subject. But the state of my family, in respect to health, not permitting of my immediately carrying my wish into effect, I transmitted, in the mean time, a copy of my work, entitled “Results of an Investigation respect-

ing epidemic and pestilential Diseases," to the Chevalier de Onis, the Spanish minister at the court of London, with a request that he would forward it, with the offer of my services, to his Government. The ambassador appeared to enter fully into my views, and lost no time in complying with my request. This was in October ; and a month would elapse before we could have an answer from Spain. The concurrence of the Government, for reasons which will hereafter appear, I deemed to be indispensable to the success of my object.

The delay which thus arose was of the less importance, as, upon grounds which I have already stated, and which I trust will be found solid, that branch of the investigation which relates to the nature and cure, I considered as being of by far the least importance ; and I should be in sufficient time to investigate all that relates to the doctrine of pestilential contagion, and the system of sanitary laws, of the phænomena of the fever of Barcelona. It was the 8th of November before I was enabled to leave London. As soon as the state of my family permitted, I set off for Spain, without waiting for the answer of Government. Upon my arrival at Madrid I was immediately commissioned by them to investigate the nature, cause, and cure of the fever of Barcelona. But some days elapsed before I could get my credentials. In the interval I was introduced to the literary societies, and some of the principal physicians, of Madrid, particularly Doctors Luzuriaga, Fabra, and Coll, members of the Government Commission of Public Health ; from whom I received the most marked civilities and attention, as well as introductions to the most eminent of their col-

leagues at Barcelona, particularly Dr. Piguillem, Proto-Medico; Dr. Salva, Dean of the Academy; Dr. Calveras, &c. &c.; in whose society I afterwards passed many pleasant and instructive hours. Dr. Urtado de Mendosa, a physician of Madrid, showed me an English copy of my work upon epidemic diseases, which he said had been smuggled into Cadiz in 1818 or 1819, and had since come into his possession. I observed to him, that, about that period, a Spanish student of medicine in London had informed me that, having transmitted a copy of the work just mentioned to Spain, he was afraid of returning to his country, lest, by that act, he might have incurred the enmity of the Inquisition. He said, in reply, that he knew that narrative to be correct; that the copy I had seen in his library was the identical one so transmitted; and that the student of medicine in question was actually in Madrid. I had not an opportunity of seeing him. But with respect to the fidelity of his narrative, and the solid grounds of his fears, besides the testimony of Dr. Urtado, no one will be disposed to doubt, who has heard or read of the treatment suffered in Cadiz by Senor Armesto, a respectable and scientific naval officer, for having promulgated some philosophical notions on the same subject not many years ago, or who knows that the work in question contains a very heterodox account of the origin of the doctrine of pestilential contagion. Since the establishment of the Constitution in 1820, Dr. Urtado has conducted a periodical work, entitled "*Decadas de Medicina y Cirurgia Practicas*," in which he has advocated the doctrine of non-contagion. To the "Results" the "*Decadas*" seem to be indebted for no inconsiderable

portion of its stock of ideas, without, however, thinking it necessary, or perhaps daring, to acknowledge the obligation. Works, professing liberal principles, and freedom of inquiry, it must be confessed, were even at that period still conducted with a tameness indicating a feeling that the Inquisition might not be dead, but only sleeping. It is well known, that, wherever the Inquisition has existed, the doctrine of pestilential contagion, as the legitimate offspring of Papal infallibility, and codes of sanitary laws, as legitimate offsprings of the doctrine of pestilential contagion, have been under the special safeguard and high protection of that formidable tribunal; and, in Spain, since the restoration of the Constitution in 1820, the fever of Barcelona has afforded the first opportunity of bringing the merits of that doctrine, and of those laws, to the test of unrestrained discussion.

These circumstances, which might otherwise seem trivial, are of importance, in so far as they tend to show the intimate connection which has always subsisted between sanitary laws and despotism; and the species of influence by which institutions, so destructive to mankind, continue to be maintained, contrary to the clearest evidence of their demerits, and in defiance of the strictest demonstration of their inefficiency for their proposed ends, as well as of the plainest proof of their unprincipled and mischievous nature, even upon the supposition that pestilential contagion had an actual existence.

In order to make out any thing like a justification of sanitary laws, the advocates of the doctrine of pestilential contagion must prove, not only the existence of a specific *virus*, as the cause of epidemic diseases,

but that diseases so propagated are in general necessarily fatal. But it must be evident to the meanest capacity, that maladies of equal intensity cannot be different in degrees of danger, according to the difference of the causes by which they may be produced. To suppose that a case of yellow fever, or of plague, if occasioned by noxious qualities of the atmosphere, or vicissitudes of temperature, or by any more numerous combination of causes, is less or more dangerous, than if it were propagated by a specific *virus*, is one of those glaring absurdities in which the system of pestilential contagion so notoriously abounds. The danger cannot be otherwise than precisely the same ; although, from the declamations of the advocates of that system, one would suppose, if he had no other *data* to judge by, that, for a disease to be the offspring of a specific *virus*, and to be necessarily fatal, were one and the same thing. Yet the proportional mortality, on diseases known to be propagated by contagion, is, under proper treatment, comparatively very small. By no circumstance, however, short of the inevitable mortality, under proper treatment, of epidemic diseases, could sanitary laws be justified, even if these diseases were unquestionably the product of a specific contagion. That they are not so, does not now remain a matter of doubt.

The Minister of the Interior, Feliu, appeared to wish that I should go to Andalusia, or some intermediate place of little importance, which he named, but which I do not now remember. To this I decidedly objected, knowing that the phænomena of the fever of Barcelona would best serve my purpose ; and it is with much pleasure I now reflect upon that determination.

The views of the Spanish Ministry, and mine, were, upon this occasion, very different, or almost diametrically opposite. Theirs were, to maintain the sanitary laws in their full force, whilst they held out to the public the hollow semblance of aid in the form of medical treatment ; mine, to effect the total abolition of these laws, without which I knew that the best medical treatment—that which, in their absence, would be undoubtedly efficient—could be of no avail. When to the physical and moral causes of pestilence, kept in perpetual operation by sanitary regulations, is added the powerful moral agency of these regulations themselves, together with the consequent concealment of their maladies, by the sick, until they are, under any circumstances, incapable of cure ; to expect to effect a recovery, by any means not supernatural, would be a gross and palpable absurdity : and understanding the subject as I do, it would have been unworthy of me to have lent myself to the delusion.

Had I been more indifferent to the most essential object of this investigation, or only ambitious of gaining a short-lived fame by a vain parade of prowess and humanity, I should have hastened to appear to administer medical succour to the sick of Barcelona, although I well knew that, under the operation of the sanitary laws, my endeavours would be necessarily unavailing ; that, by a seeming failure to perform cures, all the proper and adventitious causes of pestilence being kept in compulsory application, an efficient method of treatment would inevitably be brought into disrepute ; and that the prejudices in favour of sanitary laws would thus, for a time, be strengthened and confirmed. Per-

haps it would have been even more easy for me than for most other persons, from my peculiar personal experience of the nature and treatment of acute diseases, to have preserved or recovered my health, under whatever circumstances might occur in the course of the epidemic. But, by adopting such a line of proceeding, I considered that, if the investigation should escape being marred, it would, at any rate, be very little forwarded; whereas, by not meddling with the treatment of the sick, or even the consideration of any plan of cure; by avoiding even all inquiry into the proper causes of epidemic maladies; by keeping, in short, all collateral or extraneous topics out of sight, and adhering strictly and solely to the establishment of proof of the non-existence of pestilential contagion, and of the pernicious effects of sanitary laws, I was satisfied that I was adopting by far the most likely course of speedily and completely attaining my object. By keeping these two plain questions wholly detached, unmixed with any of the other numerous branches of the extensive subject with which they are connected, it appeared to me that the opponents of fair investigation would be deprived of their usual and only resources of disputable positions, and consequently of the means of confounding, perplexing, and mystifying, in the eyes of superficial observers, conclusions otherwise convincing. All these views I trust it will appear that I have completely accomplished, rendering the utility, or rather the necessity, of abolishing all codes of sanitary laws as clear as the noon-day sun. The result of such abolition, I will venture confidently to affirm, would, in a single season, prove twenty times more beneficial to mankind, than the curative councils of all the

physicians of the universe, could they have been assembled at Barcelona during the late epidemic. In order that I may not be misunderstood, I think it right to restate my position in another form ; it is explicitly this,—that the renunciation of the doctrine of contagion, in epidemic diseases, and the abolition of sanitary laws, would produce twenty times more benefit to mankind, than the employment, without that abolition and renunciation, of any mode of treatment that could possibly be adopted in epidemic diseases. From this it is not to be inferred, that I consider these diseases as by any means incurable ; but merely that I regard cures, under the best treatment, as incompatible with the operation of sanitary laws, or rather any efficient treatment as impossible. With these views of the subject, having seen just enough of the fever of Barcelona to assure me of its nature and causes, but especially of what was not its cause, and entertaining no apprehension that I should be suspected of having wished to avoid any danger that might be incidental to visiting the sick, I have the less to regret that insurmountable obstacles should have prevented my proceeding earlier in the season to Catalonia ; where I found that, under the delusive idea of the practicability of deriving essential succour, in such a case, from individual exertions in the way of treatment, I was anxiously expected.

Some vexatious delays occurred on the road, owing to the complete obstruction to travelling occasioned by the operation of the sanitary laws ; and I did not arrive in Barcelona until towards the conclusion of the epidemic. To travellers proceeding from Catalonia towards Madrid, these obstructions were still

more formidable. The city of Tortosa, in the direct route, was grievously afflicted with the pestilence; and other places were affected in a lesser degree, or strongly suspected. Hence even some deputies of the Cortes were obliged to perform quarantine several times, on their way to the capital; so that they were detained many months on the road. From this it may readily be conceived what inconveniences the public at large must have suffered from these sanitary regulations! There was almost a total stop to business and intercourse of all the neighbouring provinces. The towns even as far as Madrid, and I presume throughout the kingdom, had their gates shut, with the exception of one or two for exit and entrance; rendering it necessary for all the country people in the neighbourhood, who daily frequented the markets, or came on their ordinary avocations, to make long and circuitous routes.

Amongst other introductions, I had a private letter to the political chief of Catalonia, General Zarco del Valle, from his father-in-law, Sen. Gomez, of Madrid, to whose good offices I had been recommended by my friend Mr. de Bernales of London. But the government of the province being removed to the village of Esparraguera, five leagues from Barcelona, beyond the cordon, and Zarco del Valle being soon afterwards removed from the situation, I had no opportunity of availing myself of this introduction. These authorities did not return to the city for some time.

By the sanitary laws of Spain, when an epidemic prevails, the political chiefs and captains-general of provinces are obliged to reside at a certain distance from the capital, or ordinary seat of government, and

beyond the line of interdiction for the multitude. But, by the same laws, the municipal authorities of empested cities are obliged to remain at their posts. From the first *alcalde*, or mayor, Sen. Cabanes, and the other members of the municipality, I received every attention and facility towards the execution of my undertaking. The devotedness was most exemplary with which these local authorities had continued to perform their arduous and laborious duties, during this calamitous and difficult period, both by night and by day. To Sen. Montagut of Reus, one of their body, who had been educated in Scotland and spoke English fluently, I, in common with the other foreign physicians who visited Barcelona upon that occasion, felt most particular obligations.

At this period the streets of Barcelona were deserted, and the town had a dismal aspect. Although but few cases of the fever now remained, the inhabitants who had fled had not yet begun to return. The cases which were still to be met with in the general hospital, and throughout the town, were sufficient to satisfy me respecting the nature and phænomena of the disease. Among the medical faculty of the capital of Catalonia I was rejoiced to find the spirit of free inquiry, and of liberal discussion, in a state of high activity. In co-operation with ten native and four foreign physicians, who agreed regularly to assemble two evenings in the week, I immediately entered upon a minute and patient investigation of the subject of my inquiry. Our Society, thus spontaneously formed, had the remarkable, and probably unprecedented peculiarities, of being composed of physicians of four different nations, of being all volunteers serving at their

own expense, and of being actuated neither by hope of reward nor by dread of displeasure, from any government, sect, corporation, or individual. Its members in general were knowingly acting in obvious opposition to their minor personal interests. If ever a disputed question of science had a chance of being ably and dispassionately treated, or fully and impartially investigated, it was upon this occasion. Our conferences were continued with the greatest diligence, regularity, and devotedness, for the space of two months; notwithstanding occasional attempts, by our doctrinal opponents, to occasion our dispersion, sometimes by alleging that we were conspiring against the *Constitution*, at others that we were hired by commerce to mislead the world! This mode of refuting us by insinuations, they preferred to coming among us for the purpose of fair and open discussion, although we had invited them indiscriminately to an unrestrained and amicable intercourse. A distinguishing feature of this memorable association is of much too remarkable as well as singular a nature, to admit of being passed over in silence. It is probably without precedent, and will perhaps remain without imitation, in the annals of conjectural medicine. In an assemblage of fifteen physicians, occupied in frequent, long, and important deliberations, for the space of two months, perfect harmony uninterruptedly prevailed! It seemed as if, in deference to the public cause, all the usual workings of individual self-love were for the time suspended; evincing a no less conspicuous proof of general good feeling, than of the correctness of the common pursuit. But, on this occasion, credit is more particularly due to the resident

physicians of Barcelona, who were members of our Society, in proportion to the greater danger to them, in the uncertain state of the affairs of their country, of being parties to the investigation and promulgation of truths unpalatable to despotic power. Sanitary laws are weapons too precious in the hands of despotism not to be re-established in Spain; and there is but too much reason to apprehend that those, who may be known to have disinterestedly contributed to overthrow them, will suffer for having rendered such an important service to their country and to mankind. Concerning the names of my respectable native colleagues at Barcelona, which by association could not fail to confer high honour on myself, and essentially to serve the cause in which I am engaged, I would nevertheless, during the present interval of despotism in Spain, as I would not be the means of furnishing a single indication to the holy brotherhood, have imposed upon myself, however painful the self-denial, a profound silence, had not such a precaution been rendered useless by the publicity already given to them by the two translations of our joint Manifesto, which have appeared at Paris, from the pens of Doctors Lassis and Rochoux, two of our members. In the next Section I shall endeavour to do justice, by name, to my respectable associates.

SECTION VI.

MANIFESTO OF A FREE UNION OF FIFTEEN NATIVE
AND FOREIGN PHYSICIANS, ASSEMBLED AT BARCE-
LONA, RESPECTING THE CAUSE OF THE FEVER OF
THAT CITY, IN 1821, PRESENTED TO THE CORTES.

“An honest party of men acting with unanimity, are of infinitely greater consequence than the same party aiming at the same end by different views.”—ADDISON.

ON the 22d of January, 1822, our volunteer association, by a formal Act which I have in my possession, delegated the task of drawing up a Manifesto on the subject of our joint investigation, to be presented to the Cortes, to four of our number, Drs. Salva, Piguillen, Lassis, and myself. As this Manifesto is an important document in the proceedings concerning the fever of Spain in 1821, it could not properly be omitted here: it will be found to have with advantage adhered, as rigidly as circumstances would permit, to the maxim of limiting its scope to a solution of the question of pestilential contagion, and an examination of the effects of sanitary laws; it was printed at Barcelona in February 1822, presented to the Cortes on their assembling in March, reprinted at Madrid in April for the purpose of being more diffusely distributed among the Members of that body, the Ministers, foreign Ambassadors, learned Societies, &c. &c. &c.; and is as follows:

“Manifesto concerning the origin and propagation of the fever which prevailed in Barcelona in 1821, presented to the august National Congress by a free union of foreign and native physicians.

“Although the superior National Government will possess in the Reports which they have required from all the scientific bodies*, a fund of information to illustrate every point appertaining to the origin and propagation of the devastating malady which last year afflicted this capital, we, the undersigned physicians, think it no less our duty respectfully to present the annexed Manifesto to the august Congress, at the moment when they are about to open their sessions, and to discuss the project of an organic law of public health for the Spanish Monarchy. A reform is on all hands demanded, of laws, which, originating in ages of barbarism, were the offspring of gross ignorance, and which time, that destroys all things, has not yet been able to rectify, such has been the influence of a blind and miserable routine in a matter of such paramount interest to nations.

“Attracted by the same irresistible force of opinion, the undersigned physicians have freely and spontaneously formed an association in a manner so singular, that no example of it is perhaps to be found in the history of science (2). There are among us physicians, who have come from England and from France for the sole purpose of ascertaining, whether the facts observed in Barcelona were conformable with those which they had remarked in the different epidemics which they had treated, not only in various

* The Notes of the Manifesto will be found at the end of that document. See Note (1).

parts of Europe, but in Africa, and in the East and West Indies.

“Others of us, adhering to the doctrines which were held as established, had strenuously defended that of the contagious properties, and the importation of the yellow fever from the other hemisphere into our soil: but, undeceived by sad experience, they recognised the immense difference which exists between knowledge acquired from books, and that which is obtained at the bed-side of the patient; and, after having adopted a philosophical doubt, abjured their error, and did not disdain to publish an open retraction, as has been done in similar circumstances by the most celebrated physicians of America. (3)

“Almost all of us, ocular witnesses of the horrid scene, from its commencement to its termination, superior to the terror inspired by the severity of the disease, and encountering all kinds of perils, had opportunities of observing it in the lazarettoes, in the hospitals, in Barceloneta, in private houses, amongst all classes of persons, and under all the various forms and anomalies which it assumed. (4)

“For the space of two months that our meetings were held, we had no other object than to set forth severally the observations which we had noted; and, having collected a sufficient number of valuable facts, we analysed, compared, and discussed them, with the most scrupulous attention, neglecting no means to ascertain the truth, which it was often a very difficult matter to discover, amidst the general perplexity and confusion that prevailed during the epidemic.

“Our Manifesto is consequently the result of an infinity of observations, exactly noted, and duly con-

troverted : to a scientific discourse, capable of imposing upon the Government, we have preferred deducing a series of corollaries from facts, which are incontrovertible, and cannot be denied by those who are of an opposite opinion.

“The corporation spirit, which is naturally suspicious and exclusive, could not have animated physicians whose association is dissolved from the instant they sign this document : but notwithstanding the immense distance which is to separate us, a mutual correspondence will be established between us ; for, in the republic of letters, professors who entertain the same sentiments, form but one extended family. Notwithstanding our dispersion into various regions, the same philanthropic spirit, by which we are now animated, will continue to inspire us, and we will not cease to raise our voice in vindication of the rights of humanity, outraged by those sanitary laws, which, being founded on error, have only served to augment the calamities which it was their professed object to avert.

“In the first proclamation published by the Superior Junta of Sanidad of Catalonia, dated the 14th August 1821, we read : ‘The disease is exotic, *the miasmata which produced this fever having been imported from the Havannah into this port.*’

“On the 22d of the same month, another proclamation of theirs says, ‘*It is certain that hitherto the disease, which has originated in the port, has not displayed a contagious character.*’

“That of the 25th of August begins : ‘*This Junta, in concert with that of the Municipality, agree in dictating the most efficacious means for maintaining isolated the sickness proceeding from this port.*’

“Up to this moment, it has not been indicated by what vessel or vessels the disease has been imported from the Havannah to this port.

“It results from the acts of the Municipal Junta, that the first sick persons came out of the Neapolitan polacre of war, *Conception*, lying at anchor in this port since the 23d of April, *which vessel had not been at the Havannah*.

“It is equally established, that on the 28th of April 1821, a convoy of 52 vessels sailed from the Havannah, of which 20 entered the port between the 17th and 23d of June. According to authentic documents, the yellow fever did not prevail at the Havannah when the convoy sailed ; and there died on the passage but one or two individuals of common maladies. (5)

“To the brigs arrived from the Havannah, especially those called the *Tallapiedra* and the *Grand Turk*, was attached the suspicion of having been the importers of the yellow fever. Besides the declaration published in the Diary of Brusi of the 14th of August by the Captain of the *Tallapiedra* (which has not been contradicted), it appears that she put into Carthagea on the 12th of June, where she landed two of her passengers, and that the *Grand Turk* on the 5th of June landed 24 men at Cadiz, without the fever having manifested itself in these ports ; which, from their situation, latitude, temperature, &c., are more liable to it than Barcelona, situated at the eastern extremity of Spain.

“Notwithstanding that we have observations worthy of credit, that in the months of February, March, April, May, and June, there were, both in Barcelona and Barceloneta, fevers with black vomit, yellowness,

and other alarming symptoms, (as happens *sporadically*, less or more every year,) the first sickness in the port was not observed until the first of August, that is, 33 days after the arrival of the vessels of the convoy, which, added to the 60 days that intervened from their leaving the Havannah, makes a total of more than 90 days ; a period more than sufficient to develop the contagion, since it includes two rigorous quarantines.

“The goods being warehoused and dispersed at different points of the city, the malady broke out at the end of 23 days from that operation, not in any of those persons who had handled them, or carried them, but only among those whose duty required them to remain permanently in the vessels.

“In a bark arrived from the North on the 4th of September, a few days after having anchored in this port, the captain was seized with the disease, and died.

“The first appearance of the malady not having coincided with the arrival of the vessels from the Havannah, it would have been more specious to have attributed it to a clandestine introduction by means of smuggling, a stratagem to which the partizans of importation usually have recourse, when puzzled to indicate the origin of an epidemic malady.

“The importation, then, of the fever from the Havannah to this port, is not alone doubtful, but even inadmissible, since it is supported solely on the authority of persons who have asserted it only on their bare words.

“It is for the partizans of pestilential contagion to exhibit *data*, to remove the difficulties and to recon-

cile the contradictions which present themselves at first sight on reading their manifestoes ; otherwise, so far from the place of its origin being proved, it ought to be considered as a mere fable, reputed as such by all the most celebrated physicians of the West Indies, who consider *importation* as impossible. (6)

“After the disease had manifested itself in this port, sick persons went to Salou, Sitges, Malgrat, &c., without its spreading in any of these places. (7)

“From the acts of the Superior Junta of Sanidad, it appears that many days before the arrival of the soap manufacturer at Tortosa, a sick man was remarked with all the usual alarming symptoms, who had come from a bark which had been at anchor fifteen days in the river, and which it is certain had not been in the port of Barcelona. The rapidity with which the malady was propagated in that city (Tortosa), and the circumstance of thirty individuals being attacked by it at once on the 29th of August, are irreconcilable with the idea of importation. (7)

“The local and meteorological causes operating with greater intensity at Tortosa, have necessarily produced more ravage ; and to them ought to be attributed the origin, the propagation and the disappearance of the malady. (8)

“The two inspectors who proclaimed the importation of the fever of Tortosa by a soap manufacturer from this port, and its highly contagious qualities, had declared, in all their manifestoes, that the fever of Barcelona was not so, and that it was even to be hoped that it would not be so in future ! (9)

“Notwithstanding their declarations that the contagion was so active at Tortosa, these two inspectors

returned to this city, happily without having communicated it to any of those persons with whom they had intercourse, notwithstanding they had not passed a single day of observation; nor does it appear that they had undergone the purifications and expurgations which the sanitary laws prescribe. (9)

“Certain it is that the two inspectors who were in favour of the non-contagion of the fever of Barcelona, before their departure, published a contrary opinion upon their return; and have persisted in maintaining it. (9)

“We cannot adopt the idea of the *importation* of the fever from the Havannah to this port, because it does not rest upon any certain fact, nor any satisfactory reason; and because we have before our eyes evident and palpable local causes, which undermining the salubrity of the city, have, in concert with the circumstances of the seasons, and some meteorological circumstances, occasioned the epidemic. (10)

“From the neglect of the public police for many years, the sewers, drains, canals, and other channels for carrying off the impurities of the city, have been choked up or become foul to such a degree, that towards the end of June it was impossible to pass by the sea-wall, where they are discharged into the harbour, without being incommoded by the stench of accumulated and putrifying animal and vegetable substances. (11)

“Notwithstanding the work which was executed some years ago in the bed of the Condal, the shallowness of its water, the slowness of its course, the constant action of an ardent sun throughout the day; all these causes produced a stagnation of the impurities of the city, and ren-

dered their discharge difficult, giving occasion to deleterious emanations from all points of the canal. (11)

“The careful examination of the Committee charged with cleaning the port, has shown that this water-course was obstructed at its mouth by a bank of sand, which hindering its discharge, had occasioned a considerable collection of stinking water, the product of various manufactures, slaughter-houses, wash-houses, and other establishments situated on its banks, exhaling an insufferable stench. (11)

“The same Committee found that the foul water, stagnant round this sand-bank, was one foot higher than the level of the sea, and more or less in other places.

“The modern works of the port have converted it into a sort of stagnant pool, of which the cleansing has been neglected for several years, producing a focus of infection, which had not previously existed. (11)

“In the houses of Barceloneta, which face the port, in the streets de los Encantes, de la Merced, Moncado, and others adjoining the focus of infection, the mortality was horrible and nearly general; whilst in the streets of Santa Ana, Tallers, San Pedro, which are higher, and in others exposed to the north, and more distant from the focus of infection, there have been but very few sick, not above one or two in a house. (12)

“And if in the streets de las Molas, den Roig, den Patritxol, &c., distant from the port, but in the direction of south-east and north-west, the mortality has been considerable; there is nothing in this different from the anomalies observable in all epidemics, the disease proceeding, so to speak, by leaps in the same street. Besides, if we must explain every phænomen-

non, equal difficulties would militate against the existence of contagion. (13)

“It is pretended that several families had the whole time of the epidemic encamped to the right of the Seagate, in going out, being in the immediate vicinity of the focus of infection, without having experienced its effects, only two persons having died, who after all might have contracted the disease at Barceloneta. Besides its having been ascertained that many others of that encampment had perished, as they held continual intercourse and communication with the inhabitants of Barceloneta, the argument is equally applicable against contagion. And if we examine well the situation of the place in which these persons lived, we shall find that they were sheltered from the south-east, which was the conductor of the noxious exhalations, as the direction followed by the epidemic shows. (14)

“If to all the evident and palpable local causes, previously indicated, be added the state of the atmosphere anterior to the appearance of the epidemic, and the influence of meteorological phænomena, it will not admit of the smallest doubt, that the conjoint operation of all of them was more than sufficient to produce the fever, without the necessity of having recourse to an exotic and imaginary *virus*.

“The epoch of the commencement of the disease was precisely that at which epidemics of that kind have always been known regularly to manifest themselves in Spain and similar latitudes. (15)

“That which reigned in Andalusia in 1804, commenced in the month of August in ten, and in September in eight of the twenty-three towns in which it prevailed that year. (16)

“Conforming to the regular course of epidemics, that of Barcelona continued to increase till the middle of October. On the 19th of that month, the day of the greatest mortality, 246 persons died; from which period it began to diminish with equal regularity. (17)

“It was also remarked in 1804, that in sixteen towns of Spain, the greatest mortality took place in the month of October. In Cadiz and Alicante, the greatest number of deaths took place on the same day, viz. the 9th of that month. (18)

“It was at the moment that the disease had acquired its greatest degree of extension, that its severity began notably to diminish. From the 19th of October already mentioned, in which there died the above-cited 246 persons, to the 2d of November, in which there died but 98, it diminished in a regular and progressive manner, and subsequently until its total disappearance. (19)

“In 1665, it was when the number of the sick amounted to between thirty and forty thousand in London, that the epidemic successively declined and ceased. The same thing was observed at Marseilles in 1720, and in the last most destructive epidemics of Egypt and Moscow; the sickness beginning to diminish very sensibly, when the number of the sick and the dying was at the highest. (20)

“And of what diseases, produced by a known contagion, do the appearance and cessation depend upon determinate periods of the year?

“During the prevalence of a popular and general cause, all the facts which can be cited in favour of transmission from the sick to the healthy, are inex-

plicable by contact, either direct or indirect, since all is under the influence of that cause.

“The fever did not pass the ditch which surrounds the city. And if this undeniable fact does not prove that the cause has been purely local, let the cause be indicated by which it has been thus circumscribed and limited. (21)

“Not a single positive fact can be cited to prove that any healthy person has contracted the disease, beyond the sphere of the action of local causes, even having communicated with the sick and their effects.

“Thus, as during the whole month of August, those who fell ill, in front of the Casa Lonja, in the streets de los Encantes and de las Molas, it is certain, contracted their maladies in the port; so the few who sickened in Gracia, Sans, and other parts of the plain of Barcelona, contracted theirs within the walls of that city.

“And whether the aforesaid sick died or recovered, there is no proved fact to show that any of their nearest attendants were affected, if they had not been in Barcelona.

“A great number of persons, who, after passing the whole day in the capital, retired at night to their families, either in country houses, or in the nearest villages, communicated the disease to no one, whatever were the situations of these houses; not even those who had quitted the town on the very day in which they had lost a member of their family, and notwithstanding their having taken no precautions.

“The daily traffic of carriages, which had conveyed sick persons furtively introduced, or mattresses, linen, clothes, and other furniture, taken from the very focus

of infection, did not transport the malady beyond the limits which had been assigned to it.

“Notwithstanding the crowds squeezed into the smallest habitations, the general panic, the heat of the weather, and the combination of many other causes well calculated for the propagation of disease, however destitute that disease might be of any contagious property, it could not be transplanted out of the city.

“And if to respire the pure country air, or solely to go beyond the walls of the town, sufficed to destroy the activity of the pretended contagious seed, and to hinder it from fructifying in the places in which it had been sown, we find it as little prolific among those who frequented places the most fit for developing the contagious properties of any disease whatsoever possessing it.

“Thus danger, so far from being in the direct ratio of exposure (contact or intercourse with the sick), was positively (in many instances) in the inverse ratio.

“In the marine lazaretto, in which, from the 7th of August to the 13th of September, there entered 79 sick (of whom 55 died, and 24 recovered), not one, out of 32 of all classes of officers and attendants, contracted the disease.

“In the lazaretto of the vice-queen of Peru, which received 56 sick (of whom 39 died, and 17 recovered), out of 23 persons of various classes who attended them, four only contracted the disease; and these had come out of Barcelona. They recovered.

“In the hospital of the Seminario, into which 1767 persons were admitted during the epidemic (of whom

1293 died), out of 90 attendants on the sick, three only contracted the disease, which is but at the rate of one in thirty, *constituting a far greater exemption from sickness than was enjoyed by any other portion of the community.* (22)

“ In the general hospital, whilst the fever attacked persons who had no communication whatever with the sick or their effects, the vicars, the brothers and sisters, who attended the patients with the purest charity, the physicians, surgeons, &c., remained in perfect health.

“ Is it conceivable, that among such a great number of persons (attendants), there should not be any who had the disposition to be contagionised (23) (were susceptible), although differing in age, sex, temperament, mode of living, sensibility, &c.?

“ Those who intrepidly performed dissections did not contract disease. One of them, who cut himself with a scalpel, only experienced for some days a swelling of the glands of the armpit.

“ Even insane persons, shut up in their cells, were attacked. They complained of an ardour or intense heat which unexpectedly seized the head.

“ If so many and such repeated irrefragable facts do not constitute a convincing proof of the non-existence of contagion, we must acknowledge our ignorance of what ‘ a convincing proof ’ means.

“ Some families, who isolated themselves in their houses, employing the most exact precautions for avoiding external intercourse and communication, did not by such means preserve themselves from the malady, because it depends upon general causes. (24)

“ It was very common to see four, six, or even eight

individuals of the same family simultaneously affected; that is, in the same day, the same hour, the same instant. (25)

“ Various persons, who had had the fever in the West Indies and in Cadiz, not only did not escape contracting it anew, but fell victims to its severity. (25)

“ Whilst it is in our power to preserve the germ of contagious maladies, as the small-pox, the vaccine, the itch, &c., to reproduce and to spread them at pleasure; an epidemic having terminated, it is impossible to reproduce it by any known means. Many persons have inhabited apartments in which pestiferous patients had perished, without their having been white-washed; others have slept in beds in which pestiferous patients had perished, without causing the mattress to be washed or cleaned in any way; and others have used their clothes and linen without purification: and there is not a single example of a disease being communicated in this way, which disappears at a certain period. (25)

“ We may defy those who attribute this malady to exotic miasms, let them employ all imaginary means to reproduce it in the present season, or in any other, in which the same combination of causes, which produced it last year, does not exist. (25)

“ The Report of the French Commission to the Spanish Government, dated the 25th of November, not being founded on exact observation and discussion, can impose upon no one, although signed by Drs. Pariset, Bally, and François, individuals doubtless worthy of such a mission. (26)

“ After having said that ‘ *the fever of Barcelona is the true yellow fever of America (the same that we have*

seen in the West Indies and in Cadiz), they add, It is a Proteus which assumes so many different forms, and offers such singular anomalies, whether by the slowness or the quickness of its course, or by the combination, succession, or degree of its symptoms, that it is impossible to assign to it any fixed and invariable progress.’ (26)

“But what has occasioned an extraordinary surprise, even amongst the least informed, is the following passage :—‘ *The yellow fever of Barcelona is contagious to a degree that we have never observed in any similar malady.*’ (26)

“The multitude of positive facts already stated form an irresistible argument, which cannot be controverted by the Commissioners, who, in endeavouring to prove too much, have proved nothing. (26)

“These gentlemen, on account of sickness, being unable, during their short stay at Barcelona, to collect the necessary facts, were obliged to trust to the reports of persons seduced by appearances. Having amassed indiscriminately all that was related to them, the result is a tissue of assertions, which cannot resist a severe and impartial examination. (26)

“Nor is more confidence due to what has been published by the physicians, who had come from Carthage. Their writings abound with errors which refute themselves ; and, what is more, one of these professors has manifested a culpable inaccuracy in citing facts most distant from the truth ; such as the supposed importation of the fever of Barcelona to Majorca, which has been shown in the public journals to be destitute of all foundation, by the master of the bark to whom the act had been attributed. (26)

“The very sanitary precautions which have been adopted by the Government, from the beginning to the end of the epidemic, supply an argument of the most weighty kind against the existence of contagion.

“They permitted intercourse and communication between the inhabitants of Barcelona and Barceloneta to the 2d of September ; they did not hinder the removal, to the General Hospital, of the sick from the ships, even after the establishment of the lazaretto ; they persisted in declaring, in all their Manifestoes, especially in that of the 18th of August, that ‘ *the fever, although exotic, and transmitted by means of miasmata to this port, had not yet assumed a contagious character, and that probably it would not assume it in future ;* ’ forming, it must be admitted, an assemblage of proofs against the contagious property of the disease, which, however, must have belonged to it, had its origin been exotic. (27)

“After the Superior Junta of Sanidad had maintained that the disease was *not contagious*, and even desired to recall the word ‘contagion,’ which, they said, had been inserted by inadvertence in an official letter, dated the 1st of September, its professors (medical members) declared that the yellow fever existed in Barceloneta with *a tendency to a contagious character !* (28)

“The barrier between the two towns being established on the following night, its object must have been of course to stop the growth or progress of this *tendency* to a contagious character. (28)

“Experience has proved the inefficacy of these means extremely prejudicial to the unfortunate inha-

bitants, whose intercourse was interdicted, and useless towards preventing the disease from appearing in the city. (29)

“ On the 3d of September, on which day Barceloneta was isolated, or put in quarantine, there were only *nine* sick persons in that town: *by the 10th their number had increased to one hundred and sixty-two.* (29)

“ The only efficacious means employed by the Government, namely, *emigration*, at once demonstrates the influence of local causes, and destroys the idea of contagion.

“ Those who left Barceloneta, with all their effects, without submitting to the purifications enjoined by the contagionists, did not carry the disease to any of the healthy points to which they were destined; and, if a few of them sickened, the causes having been applied at Barceloneta, none of their companions or attendants were affected, who had not anteriorly been in the focus of the infection.

“ The infractions, whether direct or open, of the strict cordon by which the place was surrounded, gave occasion to the people themselves to turn it into ridicule, bestowing upon it the most contemptuous epithets. (30)

“ The vexations experienced by those who quitted Barcelona, and the arbitrary measures adopted by each separate community, even in the highest mountains, against an imaginary contagion, were an insult to humanity, and a proof the most authentic of the ignorance in which nations may be plunged by the vicious routine of sanitary laws.

“ From all that has been stated it results,

“ 1. That the fever which prevailed in Barcelona in 1821 was *indigenous*.

“ 2. That it was epidemic.

“ 3. That it was *not* contagious.

“ 4. That the sanitary measures adopted by the Government were precarious, wholly useless, and even prejudicial, if we except that of *emigration*.

“ 5. That if, instead of remaining in a shameful inaction, expecting to *knock in the head an invisible and imaginary contagion, unknown in its essence and impossible to be demonstrated*, all the means calculated to remove the local causes were employed with constancy and energy, it might be hoped that the disease would not re-appear ; that this beautiful capital would recover the degree of salubrity which it was formerly wont to enjoy ; and that commerce and industry, in a word, that prosperity, extending not only to all Catalonia, but to the whole of Spain, and even to the most distant nations, would revive.

“ Barcelona, February 21, 1822.”

Lassis (Simon), D.M. of Paris. (*a*)

Rochoux (J. A.), D.M. of Paris. (*b*)

Francisco Piguillem, M.D. of Barcelona. (*c*)

Francisco Salva, M.D. of Barcelona. (*d*)

Manuel Duran, M.D. of Barcelona. (*e*)

Juan Lopez, M.D. of Barcelona. (*f*)

Salvador Campmany, M.D. of Barcelona. (*g*)

Ignacio Porta, M.D. of Barcelona. (*h*)

- Jose Calveras, M.D. of Barcelona. (*i*)
 Antonio Mayner, M.D. of Barcelona. (*k*)
 Raymundo Duran, M.D. of Barcelona. (*l*)
 Buenaventura Sahuc, M.D. of Barcelona. (*m*)
 John Leymerie, M.D., Citizen of the United States. (*n*)
 Thomas O'Halloran, M.D. British army. (*o*)
 Charles Maclean, M.D. of London.

(*a*) Formerly Physician to the French Armies, and Physician in Chief of the Hospital of Nemours; author of "*Recherches sur les veritables Causes de Maladies epidemiques, appellées Typhus*," &c. Paris, 1819.

(*b*) Member of the Medical Commission sent by the French Government to Catalonia; formerly Physician *en second* to the Military Hospital of Fort Royal at Martinico; author of "*Recherches sur la Fievre Jaune, et Preuves de sa Non-contagion dans les Antilles*." Paris, 1822.

(*c*) Vice President of the Subdelegation of Medicine; Clinical Professor; member of various learned bodies; an eminent practitioner, who, after having distinguished himself as a writer in favour of pestilential contagion, had the magnanimity to avow his conviction of the truth of the opposite opinion.

(*a*) Honorary Physician to the King; Clinical Professor; Dean of the Faculty of Medicine of Barcelona; member of various academies. This venerable physician has been justly celebrated by Townsend for his courage and humanity, in resisting, happily with success, a despotic and barbarous mandate of the Court, directing the exclusive administration of a *nos-trum* of the King's physician, during a pestilence at Barcelona.

(*e*) Member of the Academy of Practical Medicine ; a convert from conviction at an advanced period of life.

(*f*) Member of the Superior Junta of Sanidad of Catalonia ; a man of great experience, modesty and discernment ; a convert from conviction.

(*g*) Member of the Academy ; Physician to the Military Hospital : the first to volunteer his services to attend the patients in the foul lazaretto. At the commencement, so thorough a believer in contagion as to have worn an oil-cloth dress.

(*h*) Member of the Academy of Practical Medicine.

(*i*) Member of the Subdelegation of Medicine.

(*k*) A respectable practitioner ; who occasionally exercised his talent in satirising the sanitary proceedings of 1821.

(*l*) Physician to the General Hospital. Wrote occasionally against the doctrine of pestilential contagion in the journals ; had himself the fever, in which he was attended by Dr. O'Halloran and myself, in consultation with ten or a dozen of our Barcelona colleagues. Extreme unction had been administered ; but happily he recovered, to the great satisfaction of all his professional brethren, as well as to the benefit of our joint Manifesto.

(*m*) Physician to the General Hospital ; had double labour during the latter part of the epidemic, on account of the illness of his colleague, which he performed with much cheerfulness. Animated with a laudable anxiety to give information respecting the affairs of his department.

(*n*) Formerly Physician in chief to the Hospi-

tal of Santiago in Paris ; member of various learned societies ; and attached to the American Legation at Madrid.

(o) Member of the medical academies of Madrid and Barcelona ; author of two works on the epidemics of Spain ; a volunteer, with permission of His Royal Highness the Duke of York, to investigate the fever of Barcelona, and to succour its suffering inhabitants.

N.B. In order to obviate misconception, I think it right here to observe, that the first edition of the Manifesto, published at Barcelona, had only *thirteen* signatures, Drs. Leymerie and O'Halloran having left that city before it appeared. Their names were however added on the publication of the Madrid edition, augmenting the signatures to *fifteen*, being the original number of our spontaneous association. We had indeed been favoured, during several meetings at the commencement, with the company of two of those members of the Academy, who afterwards signed the contagion Manifesto of the fragment of that body, having doubtless found it convenient to be reconverted. The name of one of these gentlemen is attached to a receipt now in my possession for quarantine duties, paid by the master of a British vessel, in the port of Barcelona ; and the other had atonement to make for some aberrations from the strict path of duty, during the epidemic, for which orthodoxy alone could procure plenary indulgence. Re-conversion *from conviction* is as little to be expected as re-contagion of small-pox. It is remarkable that all the physicians who attended the hospitals or lazarettoes of Barcelona, during the epidemic, and consequently

had the greatest sum of experience of that disease; were decided non-contagionists. The principal ones, if not the whole of the survivors, are to be found in the preceding list.

Notes to the Manifesto.

“Many things are needful for explication, and many for application into particular occasions.”—HOOKER.

(1) This alludes to a royal order addressed to the political chiefs of Catalonia and Andalusia, &c., dated the 19th of January 1822, in consequence of a decree of the extraordinary Cortes, dated 13th December 1821, directing that these authorities should concur with the academies and schools of physic, in commissioning *the most enlightened professors and other persons of distinguished talent*, who should be requested to remit *data* and observations concerning the yellow fever, for the information of the Government; taking care that *those of different opinions on the point of contagion, should be as nearly as possible in equal number.*

(2) This assemblage may be said to form a striking contrast to that of the Fathers of the Council of Trent, by whose instrumentality, in 1547, the doctrine of pestilential contagion was first formally accredited.

(3) The ten resident Physicians of Barcelona, whose signatures are affixed to this Manifesto, with perhaps the single exception of Dr. Salva, may be said to have been originally adherents of the doctrine of pestilential contagion. Professor Piguillem had even written in its favour; and Dr. Campmany, at the commencement of the epidemic, like some of the

members of the French Medical Commission, wore an oil-cloth dress.

(4) Although the ravages of this epidemic were, from political motives, almost incredibly exaggerated in the French Journals, of which Dr. Pariset (the chief member of the French Commission) had been or was at the time a censor, these exaggerations being spread by repetition in the journals of other countries; yet its mortality, owing principally to these hypocritical extravagances, and the consequent increased severity of the sanitary laws, was truly formidable, as is evident from the fact, that nine physicians and ten surgeons perished, being a fourth, or perhaps a third, of the medical faculty of Barcelona and Barceloneta.

(5) The crews of these vessels and the men-of-war of the convoy, together with passengers, did not amount to less than 2000 persons. Out of this number but two deaths happened during the passage, and there were but a very few sick during the first part of the voyage as the convoy approached Bermuda. No fleet so numerous perhaps ever arrived in Spain in such a good state of health. They had all clean bills or patents.

(6) No person in *the West Indies* ever expects the yellow fever to be *imported from Europe*. But can any one assign a reason, why a contagion should not be as capable of being transferred from Europe to the West Indies, as from the West Indies to Europe? Are not all known contagions, as small-pox, capable of being so transported? Is there to be no end of refuting the absurd assertions brought forward as

facts by the advocates of pestilential contagion? I have in Section 3 cited a glaring instance of their manner of proceeding, and of their little attention to accuracy, in the case of Dr. Pym's evidence respecting the *Theseus* man-of-war. In a similar manner the fever of Cadiz in 1819 was alleged to have been introduced by a vessel called the *Asia*. But from facts stated by Dr. Pariset himself, it incidentally results, that the disease had appeared in Cadiz two days before the arrival of the *Asia*; from which it is clear that if it had even been proved to be contagious, it had not been first imported by that vessel. The fever of Barcelona having been confidently imputed to an importation by the *Tallapiedra* and the *Grand Turk*, all sorts of falsehoods have been related respecting these vessels. Amongst others it has been said by the French commissioners, (at p. 36 of their Report,) that "the captain of the *Grand Turk* on a certain day received his family on board, and that a short time afterwards they died of the black vomit." But neither Mr. Segrera, the master of the *Grand Turk*, nor any one of his family, had been at all attacked with the epidemic. Rumours equally unfounded were converted into certainty at Barcelona, that the fever of Palma had been introduced from the former city by a master of a bark named Coll, who was reported to have given it to his whole family. It was even reported, that this man had been garotted (strangled) for an infraction of the quarantine laws: and these tales were repeated as *facts* in a paper intended to instruct the world (*Diario Dorca*, 8th Feb. 1822) by Dr. Furio, one of the Carthagena Medical Com-

missioners sent by Government to investigate the fever of Barcelona. Some time after the appearance of this paper, walking on the sea rampart with Mr. Kennet, Mr. Carey, Mr. Hewett, and Mr. Carson, we met with the *Patron* (master of a vessel) Coll, who was well known to the two former gentlemen, being the commander of a regular packet to Palma. He loudly expressed his indignation at the stories circulated respecting him; assured us that, *far from having been ill, neither he nor his family had ever enjoyed better health; that the whole narrative was a tissue of gross falsehood*; and that he should immediately send a flat contradiction of it to the journals, which in effect did appear a day or two thereafter (*Diario Dorca*, 9th March 1822).

(7.7.7) There was not one of the numerous villages situated within the Cordon, in the plain of Barcelona, which was not the daily resort of a great many persons from that city, both sick and well, during the height, as well as at the beginning and end, of the epidemic; yet the malady was no where propagated. The same thing happened at Tortosa, with respect to the villages Jesus and las Roquetas on the opposite bank of the Ebro. But notwithstanding these and the other similar facts stated in the Manifesto, respecting Salou, Sitges, and Malgrat, to which I might add Canet del Mar, Villa Nueva de Geltru, and many other, in fact, all places in which the air was not such as would of itself have produced the malady, the French Medical Commissioners (Report, p. 57.) have not hesitated to say: "With a very small number of exceptions, *not worth the reckoning*, the disease has not been carried to any place, with-

out being propagated." These assertions, it is to be recollected, are founded on nothing more than the mere traditional evidence of the partizans of pestilential contagion; whilst the facts of an opposite nature which I have related, are founded on the correspondence of the various Juntas of Sanidad, and other public authorities, examined and copied by myself, or under my direction, at the office of the Political Chief of Catalonia*. The number of persons who died, after having been removed in a state of sickness, from Barcelona, Tortosa, and Palma, into the neighbouring villages, is reckoned to have exceeded 300. These 300 could not have failed to be in communication with at least 3000 persons. Is it possible, if the disease had been contagious, that it should not have been communicated to these, and from these to other persons?

(8) Tortosa is situated on the left or eastern bank of the Ebro, close to the foot of a steep or nearly perpendicular mountain, which powerfully reflects the rays of the sun, having on the other sides vast marshes. It is consequently liable to severe fevers, which occur almost annually in the autumn, when all the more wealthy inhabitants usually quit the town. The river is large and its course very slow. In 1821, owing

* To my countrymen Mr. Hewett, Mr. Mason, and Mr. Carson, at the time residing at the Fonda de los quatro naciones, I have to acknowledge my very great obligations for their volunteer services in aiding me to examine and copy documents at the office of the Political Chief of Catalonia, and in other public archives. The first of these gentlemen cheerfully went through the Herculean labour of copying a register of the weather for a series of years, of which proper use shall be made in due time.

to the excessive drought, the waters of this river were lower than they had been for more than a hundred years ; and the heat was excessive. Surely there are here real causes enough of disease, without enlisting an imaginary one into the service.

(9. 9. 9) The whole of the doctrine of pestilential contagion is composed of contradictions and absurdities of which these are fair specimens. A disease not contagious becoming so, or a contagious disease ceasing to be so, are equally pure nonsense, notwithstanding the axiom of one of the chief authorities of the pestilential contagionists, which, as a curiosity, I deem worthy of being quoted : “ *Contagium est morbi primò Soboles, postea causa, quia non existit nisi post morbum primò inductum ; nam qui primus peste correptus fuit, illam a contagione non contraxit.*”—*Diemerbroek de Peste*, c. 8. This is a different version from that of the Committee of the House of Commons of “ the received doctrine.” Which is the genuine one it does not belong to me to decide.

(10) I have a hundred times proved, upon general grounds, the impossibility of the existence of pestilential contagion ; consequently that it can neither be *imported, exported, or propagated* ; and, *a fortiori*, that its importation into any particular place, from any other, cannot happen. In condescending, in this Manifesto, to disprove this alleged importation of the fever of Barcelona from the Antilles, we were therefore, in mere compliance with local prejudices, performing a work of supererogation.

(11. 11. 11. 11) Here also we were constrained, from the presumed necessity of falling in with local

views, somewhat to depart from our rule of adhering strictly and exclusively to the examination of the validity of the doctrine of pestilential contagion, and to glance partially, in so far as they were peculiar to Barcelona, at the real causes of pestilence. I do not at present insist upon the entire accuracy of these views. Perhaps too much importance has been attributed by us to some of the local causes ; and, for myself, I entertain considerable doubts, whether the measures which have been adopted for cleansing the harbour will be found to answer their intended purpose. Had it been our design to investigate the real causes, or to do more than merely to allude to such of them as called for some sort of animadversion, it would have been incumbent upon us to have particularly inquired amongst others, into the state of predisposition to disease of the different classes of the community inhabiting the quarters of the city variously affected. But such discussions, in order not unnecessarily to enable our adversaries to avail themselves of disputable points for the purpose of mystification, or of withdrawing the public attention from the principal question at issue, it was our wish, as much as possible, to avoid. They will properly form the object of the second part of this work. In the mean time I may observe that the event has fully justified our precaution. The Medical Commission of the French Government, instead of limiting their endeavours to prove the existence of the cause to which they themselves, in compliance with common prejudice, and probably with their orders, had chosen to impute the fever of Barcelona, which, could they have succeeded, would have been quite sufficient for their

purpose ; for in that case it would not have been necessary, nay it would have been in vain, to have looked for any other cause ; instead of this, I say, they have chosen, leaving their own doctrine to its fate, not merely to dispute the reasoning, but to deny the facts of their adversaries. To their senses, the sewers, canals, or other conductors of the filth of Barcelona, appeared limpid, rapid, and inodorous : “or ces eaux tantot divisees, et tantot reunies, sont toujours courantes ; elles conservent presque par tout leur limpidité naturelle, et lorsqu’elles arrivent à la mer, c’est à dire, au point où elles sont reçu le plus de melanges de toute espece, *l’odorat saisit à peine les emanations qu’elles laissent echapper.*” (Report, p. 13.) There would appear to be a wonderful difference between the olfactorysusceptibilities of a Government Commission, and of a spontaneous assemblage of physicians ! Into the moral causes of such difference, I hold it to be unnecessary here to inquire, since, if reçu the former had the most accuratescent in respect to this point, it would not by any means follow, that they would be nearer their object of proving *contagion* to have been the cause of the fever of Barcelona. It would only follow, that by as much as must be diminished from the number or intensity of the strictly local causes assigned in the Manifesto of the “free union,” so much must be added to the influence of the atmospherical or meteorological phænomena, and of the predisposing causes. That they were not correct, however, we may very reasonably infer, from the simple facts, that their “*limpid, rapid, and inodorous*” streams had been once cleansed in September 1821, by order of the Municipality (Sucinta Relacion, &c. p. 107.) ; and

again, by order of the Mayor, in March 1822 (*Diario Brusi*, 29th March 1822).

(12) The course which the disease took through the town, so wholly inexplicable, according to the doctrine of pestilential contagion, admits, upon correct principles, of easy solution. At a certain elevation, and out of the course of the south-east wind, no one sickened who had not been exposed to the operation of the causes existing towards the lower part of the city. The small houses of Barceloneta were liable to be excessively heated by the intense action of the sun, which had there thrown the inhabitants into a state of predisposition to disease; and the vessels in the harbour were also liable, even in a still higher degree, to the operation of the same agent; so that, when the influence of the same efficient cause began to develop itself, the inhabitants of the vessels, and of Barceloneta, were, owing to their state of predisposition, the most readily affected. Hence principally the extent and violence of the disease. If this cause (the heat) did not operate so powerfully on the larger buildings of Barcelona, its place was in some measure supplied, in the lower part of the town, by the deleterious effluvia arising from the mouths of the sewers, which, from the course of the winds, could not have an equal effect upon Barceloneta, and whose influence did not reach the upper parts of Barcelona at all. Hence those parts enjoyed a total exemption. The Hospital of the Seminario, for instance, although full of sick, I would, from its situation and structure, have unhesitatingly chosen, as a safe place of refuge, during the epidemic. The same observation would hold equally true of many others of the public buildings.

(13) The difficulties would be much greater of explaining the phænomena on the principles of the doctrine of contagion; or rather they are not only inexplicable but inconceivable. Whilst a contagious disease can only proceed regularly in the ratio and direction of communication, the irregular or partial course of whirlwinds, water-spouts, storms of wind, rain, hail, or snow, and other atmospherical or meteorological phænomena, may serve analogically to explain the occasional deviations perceptible in epidemics from an uniform course. On the 24th of December 1821, whilst I was at Barcelona, a storm simultaneously prevailed, and did much damage, at Tarragona, Lisbon, Nancy, and other parts distant from each other, without being sensibly or at all felt in the intermediate places. The same thing happens in respect to floods, &c.; and these phænomena may serve analogically to explain the irregular or unequal course of epidemics, according to the irregular or unequal application of their causes. Epidemics may arise simultaneously from similar causes operating in Barcelona, Tortosa, Palma, and other places, as storms may arise simultaneously from similar causes operating at Tarragona, Lisbon, Nancy, and other places. But if in either case the evil was transmitted or propagated from the one to the other, how could it possibly be so transmitted or propagated without affecting the intermediate places? The manner in which epidemics spread, as it were by leaps, through various parts of the same town, or of the same street, may be not unaptly illustrated by the partial and irregular manner in which the dust or sand is so frequently observed to be raised by whirlwinds in some spots, whilst the adjacent ones

are quite tranquil. Such irregularities take place, in a greater or less degree, in every epidemic ; and whether the explanation, which I have here given, respecting the nature of the cause, be satisfactory or otherwise, two things are very clearly to be inferred, viz. that the cause, whatever it be, is operating with an inequality corresponding with that of its effects, and that it cannot be of the nature of a specific contagion. In a narrow street of Barcelona, called Calle de la Daguirea, principally occupied by cutlers, 130 persons died, whilst in a small place, within ten yards of it, called de los Cols, not one perished. This difference must have depended chiefly upon the position of the streets and houses in respect to the prevailing winds, and upon the occupations and manner of living of the inhabitants, &c. But into the particulars of these differences I had not an opportunity of making due inquiry.

The most remarkable and distinct illustration of these principles that I have ever met with, was in the circumstances and fate of two families that resided close to each other in Barceloneta ; they both lived about the middle of the south side of the Calla Santa Barbara ; but being also at the entrance of one of the cross streets, running north and south, they were opposite as well as next door neighbours ; the houses were of the same size, plan and structure. The easternmost family, that of Andrea Gallup, consisted of six persons ; they keep a grocer's and mat-seller's shop, which was throughout the day open, and in the course of business they were in constant communication with the public ; here not one was sick. The westernmost family consisted of ten members ; they kept a

wine and liquor shop, and were of course in constant communication with the public : *every one sickened ; nine died* ; the servant alone having recovered, from herself and from the members of the other family, I had these particulars in the presence of the principal Alcalde and Mr. Montagut, who accompanied me. These two families had constant intercourse with the whole town as well as with each other. The only discernible difference in their situation, arose from their calling, and the exposure of the houses : the grocer and mat-seller, whose family did not suffer at all, was sheltered from the south-east wind, whilst the wine and spirit merchant's family, every one of whom suffered, were in a certain degree directly exposed to its influence ; there might also have been a considerable difference in the mode of living, manner of sleeping, and in the physical and moral powers of the parties ; these circumstances I had not an opportunity of ascertaining ; but it is reasonable to take for granted, as we are also justified in inferring from the event, that in all these respects the balance must have been considerably in favour of the grocer, and against the publican : one thing at any rate is certain, that contagion could have had no share in the formation of the cause of the disease ; otherwise, under unrestrained communication, entire exemption from sickness, and almost total destruction, could not have been next door neighbours.

(14) Besides being sheltered from the pestiferous wind, the persons so encamped were too far from the ditch which passed behind Barceloneta to be affected by it, and being to windward of the effluvia of the sewers of Barcelona, they were blown directly away

from them; they were also, being under tents, not so much exposed to heat as under or over the heated boards of the vessels in the harbour, or under the heated tiles of the low houses of Barceloneta, whilst they enjoyed a far better ventilation. Other things being equal, the persons so situated were obviously in a better condition to resist the epidemic than the inhabitants of the lower part of Barcelona, of the town of Barceloneta, or of the vessels in the harbour; whereas, if the disease had been contagious, they would have been between *three* fires.

(15) See this principle elucidated in my "Results of an Investigation respecting epidemic and pestilential Diseases," &c., vol. i. ch. 8. p. 228, 237.

(16) Id. p. 231.

(17) The laws which regulate the progress and decline of epidemic diseases are explained in ch. xii. p. 311—342 of the same work.

(18.) At Gibraltar, the greatest mortality that year happened also on the 9th of October. Id. Ibid. p. 237.

(19) Id. ch. xii.

(20) Id. ch. viii. p. 233.

(21) The fever not only did not pass the ditch which surrounds the city, but it did not even approach it. By far the greatest part of the town was wholly exempt from the malady.

(22) So completely pure is the air, so excellent the situation, and so fitting the structure of this establishment, that scarcely the united consequences of fear and starvation could produce an epidemic in it, the usual efficient cause being wholly wanting. The three out of the 90 attendants who sickened must be therefore deemed to have been exposed to the causes

of the disease previous to entering, or by afterwards visiting the lower part of the town. Dr. Vila, who had attended the patients in this hospital during the whole of the epidemic, and had dissected in it, remained in perfect health ; but towards the termination of the epidemic, and after this institution had been shut up, he sickened in the town and died.

(23) I am obliged to use the word "*contagioned*," in order to express clearly what I mean, as neither *infected* nor any other single word with which I am acquainted, would convey the intended idea.

(24) I have so repeatedly shown the principle upon which security or insecurity depends among those who shut themselves up during an epidemic, that I feel great reluctance in again adverting to the subject. Those who shut themselves up in good air, and have the means of making themselves morally and physically comfortable during their confinement, are sure of being exempt from disease ; and this exemption they may enjoy even if the air be in a small degree pestilential. But persons shutting themselves up in a pestilential atmosphere, and having fear for their companion, or wanting the physical means of rendering their condition comfortable, will, *cæteris paribus*, be sooner affected than those who mingle in indiscriminate intercourse. Those who shut themselves up are generally exempt from disease, not because they are secluded, but because they are of a description of persons who possess the means of safety to which I have adverted : this happened generally in Malta in 1813 ; but if they do not possess those means, both physical and moral, to the necessary extent, or if they commit the mistake of secluding them-

selves in a deleterious atmosphere, they are sure to be amongst the first to sicken : this happened generally in one of the most recent epidemics of Gibraltar. Should the inhabitants of the lowest, narrowest, and dampest streets, and the meanest houses in a town in which pestilence prevails, take it in their heads to shut themselves up, how many of them can we suppose would escape ? In all probability, scarcely enough to tell the tale of their sufferings ! I will relate but one instance of the result of shutting up during the epidemic of Barcelona in 1821 : the Ex-regent of the Audiencia (corresponding with Chief Justice in England), Dr. Francisco Olea, residing in the Calle de Rissoll, secluded himself, with his family and servants, at the commencement of the sickness, having previously laid in a large stock of provisions, and throughout observed the most rigid precautions ; his journals and letters were received at the end of a cleft stick ; they were twice immersed in vinegar, and dried before perusal. After being shut up for thirty-seven days, seven individuals of his family sickened ; the disease indeed, although possessing the distinctive character of the epidemic, was not of a malignant kind ; and all the members of this respectable family happily recovered. The advocates of contagion, according to their usual custom, will explain this instance of insecurity very easily, by taking for granted that the precautionary rules were violated, and that contagion was introduced, having previously assumed the *existence* of contagion from the presence of the disease. It is in vain to reason with persons who never think it incumbent upon themselves to give proof of any of their affirmative propositions,, but in-

variably seek to throw on their opponents the *onus* of proving negatives.

(25. 25. 25. 25) These articles afford ample confirmation, as far as regards the fever of Barcelona, of principles which have been fully elucidated in my work above referred to, as applied to epidemic diseases in general.

(26. 26. 26. 26. 26. 26) For an able and detailed refutation of the allegations of the French and Cartagena Medical Commissioners, see Dr. O'Halloran's Remarks on the Yellow Fever of the South and East Coasts of Spain, &c.

(27) None of the sanitary precautions being founded on principle, it unavoidably often happens, that the one is calculated to counteract the other. With respect to a disease being of exotic origin, but not contagious, it is pure unqualified nonsense.

28. 28) Here we witness the effects of the struggle between truth still indistinctly perceived, and prejudice diminishing in force, in the minds of the pestilential contagionists. How any mortal can discern "*a tendency to a contagious character*," I profess myself utterly unable to conceive. It is one of the arcana of the system, I presume, which it is for adepts alone to fathom. But if this be inconceivable to uninspired non-contagionist mortals, how must they despair of divining the proper mode of preventing the growth of this "*tendency to a contagious character*," into an *actual contagion*! Successfully to combat "*a tendency*" by walls or other common barriers, would seem to the uninitiated to infer an intelligence, if not supernatural, at least superhuman.

(29. 29) I have at the end of the first of these ar-

ticles, altered the expression in the original “penetrating into,” into *appearing in*, the city, as conveying less incorrectly the idea intended. A disease not being a substance, but the condition of an organ, or organs, cannot, if it were even contagious, “penetrate” into a city. The disease ready made, does not enter into and fasten itself upon the first person it meets. It is only its *causes* that can thus penetrate and change the condition of the organs to which they are applied. Nor is the distinction by any means unessential, when speaking of a disease that is not contagious, since the usual phraseology would, in that case, convey very erroneous ideas.

We now come to that part of the inquiry which is of by much the greatest importance—the effects of the operation of the sanitary laws. In seven days from the period of imposing the restrictions, the daily mortality in Barceloneta had increased precisely *eighteen fold*! Will the advocates of contagion say, that if the sanitary regulations had not been imposed the whole town would have perished? They must say something like this in order to justify their opinion! But have we not a much better right to say, that if the sanitary restrictions had not been at all imposed, the number of the daily deaths would never have exceeded fifteen or twenty? Since these abominable laws exist in all Christian communities, and since Mahomedans, Hindoos, or others, who do not admit them, have either no regular bills of mortality, or none to which we have access, there exist, from direct facts, no accurate means of comparison: we must therefore reason from the nature of things. From the usual course

of epidemics, then, the contagionists themselves must admit that their sanitary restrictions do not prevent the increase of sickness during the months of August, September, and the first half of October. The utmost that they can assert, is, that they *seem* to begin to have effect, having then perhaps got their hand in, and gained some experience, *after* the middle of October. From that period, indeed, until the final cessation of disease in November or December, these regulations seem to perform prodigies. But how will their advocates explain the facts that they seem to operate favourably in certain months only, and that epidemics in similar latitudes ordinarily commence, spread, decline and cease, at the very same periods and in the very same manner, but only with a much less ravage, where those precautions do not exist? Surely if sanitary laws could have occasioned an epidemic to decrease, when it had arrived at its height, they could, *a fortiori*, have put an immediate stop to its progress, before it had acquired so high a degree of virulence. The conclusion from all these premises is, that however sanitary laws may increase the severity of epidemic diseases, they have no effect whatsoever in restricting or mitigating them. The former effect was palpable and dreadful in Barcelona; insomuch, that after something very nearly resembling a popular commotion, the most obnoxious of the restrictions were removed. I have already declared that, in my opinion, if those sanitary restrictions had not been imposed, far from attaining to the extent of 246 deaths *per diem*, the mortality would never have exceeded fifteen or twenty a day; and I will now add, that if, together with the abolition of sanitary laws, the belief in the doctrine of

pestilential contagion were also renounced, the mortality, under the existence of otherwise similar circumstances with those which prevailed in Barcelona in 1821, would not probably exceed nine or ten daily at the height of the epidemic.

But the most convincing proofs that can well be imagined of the inefficiency of sanitary laws for their professed objects, as well as their positive pernicious consequences, have been afforded by the events of the fever of Tortosa. The sanitary restrictions established at Tortosa in 1821, were remarkable both for their rigour, and for having been imposed a considerable time, not only before their apprehension of contagion was officially proclaimed by the Juntas of Barcelona, but before any suspected deaths or sickness had taken place at Tortosa itself; yet no place has ever been more afflicted than that unfortunate city. On this subject let the evidence of the military governor, Don Miguel de Haro, in a letter to the political chief of Catalonia, dated the 26th of August 1821, speak for itself: "As soon as the first notices of the contagion were received, the municipality and municipal Board of Health assembled in a joint body. They act with absolute independence of all other authority. In vain does the Superior Junta of Health of the province daily report the state and progress of the disease; in vain is it asserted that the city of Barcelona is free from contagion; in vain does your order of the 15th require the communication not to be cut off, and that passengers shall not be detained who have regular passports—for this Junta, before that of any other town, cuts off all intercourse by land and water; establishes fowl lazarettoes, and lazarettoes of observation—

placing sentinels at the gates ; adopting an infinity of measures, and ordering to the lazarettoes for an indefinite period, all travellers coming from Barcelona. They interrupt the entrance of vessels, and put a stop to the important commerce arising from the manufacture of oil. Finally, a sailor falls sick, coming from the river (Ebro), who had not been in Barcelona, nor held any communication with infected vessels ; and in consequence of the doctors not being well acquainted with his disease, they treated him as pestiferous—and this man at length dying in the lazaretto, they conclude with alarming the people by the measures they adopt for the interment of the body.

“By the conduct, then, of this Junta, they have set an example of disobedience highly injurious to the State ; and have given undue importance to the malady in question, to the great prejudice of Barcelona and of the principality. They have alarmed the whole nation, and particularly the kingdom of Valencia ; and have suspended the extensive and lucrative maritime commerce which existed with foreign countries—a commerce which draws from that district rivers of oil, supplying it in return with rivers of gold.”

It is evident, although the precise date of the imposition of the sanitary restrictions at Tortosa is not here mentioned, that it must have been early in August, probably before the 10th of that month, for the alarm was first officially given in Barcelona on the 3d ; and the order of the Political Chief dated the 15th, alluded to by de Haro, must have been written in consequence of information of their existence, or complaint of their rigour. They must therefore have been imposed before the first suspected death took place,

which was in the person of Buenventura Puich, the seaman alluded to in the Governor's letters, who had been fifteen days in the river, and had not been at all at Barcelona. By another letter of the same Governor, to the Political Chief, dated the 29th of August, we find that it was only on the preceding day (28th) that the epidemic was considered as having first made its appearance at Tortosa, five persons having died of it on the night of the 28th, and *thirty* being taken ill on the morning of the 29th. It was now that the people thought of attributing the importation of the disease to a soap manufacturer, who was said to have arrived on the 28th of July from Barcelona, and to have died a few days thereafter. This death, if it happened at all, must have happened about the first days of August. But what becomes of the contagion between that period and the 15th, on which day the sailor died; and between the 15th and 28th, on which the fever evinced itself as an epidemic? It is not by irregular intervals of this kind, by leaps, that a contagious disease is propagated; nor by affecting simultaneously five, ten, twenty or thirty persons; but by a gradual and distinct succession. The epidemic now proceeded with a rapidity truly alarming. On the 5th of September, Governor de Haro writes that an eminent surgeon had died, and that the best physician was dying; and that, in their consternation, three-fourths of the inhabitants had left the place and gone into the country. He solicits fresh medical aid. "It is also absolutely necessary," adds he, "that some one should come to take charge of the Civil Government—as of the two Alcaldes, the first has shut himself up in his house and will not act, and the second has gone away. The

senior Regidor has done the same, and the town is abandoned.—and myself continue well, although it a miracle that we escape.”

Between the death of Buenventura Puich, and that of the next five victims, there was an interval of thirteen days ; but, between their deaths, and the simultaneous sickening of *thirty* persons, on the 29th of August, there was only the interval of one night. These phænomena, among many others, prove unquestionably, as far as the fever of Tortosa was concerned, both the non-existence of contagion, and the perniciousness of the system of sanitary laws. The conduct of the authorities in that city, as described by General de Haro, affords a correct specimen of the despotism, and independence of all controul of superior authority, as well as of reason, with which the sanitary code is carried into effect, according to their respective caprices or fears, by the local authorities of each of the separate communities of which Spain is composed. Mr. Kennett, a highly respectable Englishman, married to a Catalonian lady of rank, related to me many measures of severity which, as a member of a Junta of Sanidad, in one of those mountainous villages in which an epidemic has perhaps never been known, he had considered it his indispensable duty to carry into effect ; adding, that from the illustrations of the subject which he had recently heard from myself and others, he would not be again accessory to the commission of similar acts.

(30) I am in possession of a journal, kept by an ingenious gentleman of Barcelona throughout the epi-

demic, containing a great variety of curious traits and popular anecdotes, of which I shall probably make some use in my projected history of the fever of that city. He thought it might be dangerous to publish it in Spain; and, as events have turned out, he judged right.

SECTION VII.

REPRESENTATION MADE TO THE CORTES FROM BARCELONA.—DETERMINE TO PROCEED TO MADRID.

“ And now, as oft in some distemper'd state,
On one nice trick depends the general fate.”—POPE.

SEEING that the preceding Manifesto, circumstantial and complete as it was, could only strictly apply to the meridian of Barcelona, and to the fever of 1821, I felt that it would be necessary, if we would establish grounds for the general abolition of sanitary laws, to adopt a basis of probation which should embrace all meridians, and comprehend all epidemics; *i. e.* to lay before the Cortes, in a concentrated form, the substance of the proofs which I had previously, at various periods, published on the subject; supported by the additional facts supplied by the fevers of Barcelona, Tortosa, and Palma, in 1821. There was, besides, reason to apprehend that the effects, which the Barcelona Manifesto was otherwise so well calculated to produce, might be frustrated in the capital by intrigue; and that the new project of sanitary laws, however absurd or pernicious it might be, would very probably be passed, if not *sub silentio*, at least without any adequate discussion.

For these reasons, and because it seemed probable that the persons interested directly or indirectly in the

maintenance of sanitary laws, who were a numerous body, would endeavour to influence the Cortes to accelerate the discussion of the project of the code of sanitary laws, which was in preparation, I thought it expedient to inform that body, through the medium of Señor Roman Salvato, one of the deputies for Catalonia, that I was preparing for their information an additional elucidation of the subject.

To the Cortes.

“ Barcelona, 4th March 1822.

“ IN a free union of fifteen physicians, native and foreign, at Barcelona, I had the honour of concurring in a joint Manifesto, dated the 21st ult., respectfully submitting to the Cortes our deliberate and solemn conclusion, that the fever of that city, in 1821, did not depend upon a specific contagion; and setting forth several of the numerous facts upon which that conclusion is founded.

“ But it is essential to observe, that an individual epidemic, however considerable in itself, is, to the sum total of pestilential maladies, only as a grain of sand upon the sea-shore; and that the proof of the non-existence of contagion, in any particular epidemic, however perfect that proof may be, cannot invalidate the doctrine of contagion generally, in epidemic diseases.

“ For this reason, and in order to execute, in the most beneficial manner for science, for the Spanish nation, and for humanity at large, the important and delicate mission with which His Catholic Majesty was pleased to intrust me, in November last, I deem it

expedient, besides my share in that joint representation concerning the fever of Barcelona, to address a distinct memorial to the National Congress, disproving, upon the broad basis of general principles, the existence of contagion universally in epidemic diseases.

“ But as it will be yet some weeks before I can finish that memorial in a manner that shall not be unworthy of the subject of which it is to treat, or of the august body to whom it is to be presented; and as the project of an organic law of public health for the Spanish monarchy, of which a copy has just come to my hands, is of a nature truly alarming in these enlightened times, I should deem myself egregiously wanting to the duties of humanity, if I were to delay a single moment in announcing this my intention, or in beseeching the Cortes to postpone for a short time the discussion of the important subject of the sanitary laws, which I pledge myself to demonstrate are wholly founded on a delusion.

“ It would, I am humbly of opinion, tend much to elucidate the gratuitously mischievous effects of those laws to the nation, if the Cortes would be pleased to direct returns to be made from all the provinces, of the amount of the extraordinary expenses, in years of pestilence, attending their administration.

“ CHARLES MACLEAN.”

Instead of returning directly from Barcelona to England, which would have left the investigation almost without any immediate result, I determined, however inconvenient, to proceed to Madrid, in order

to lay my ideas before the Cortes, in a separate exposition or memorial, demonstrating the non-existence of pestilential contagion universally, and the destructive effects of sanitary laws ; as well as to be ready to adopt, on the spot, all such other measures as might appear expedient, with a view to frustrate the design of those who might endeavour, from interested motives, or in absolute blindness, to maintain the existing sanitary establishments, rendered perhaps more destructive by such aggravations as might be suggested by modern refinement.

In February, 1822, appeared a narrative from the municipality of Barcelona, of the principal occurrences of the recent epidemic, bearing the title of “*Sucinta Relacion de las principales Operaciones del Excellentissimo Ayuntamiento Constitucional de la Ciudad de Barcelona en el Ano 1821.*” From this narrative it appears that the local authorities, especially the municipal, did every thing in their power compatible with the delusions by which they were surrounded, and with superior orders, to ameliorate the lot of the suffering inhabitants ; and their efforts certainly contributed to prevent a great many persons from starving whom the fever had spared, but whom sanitary laws had deprived of employment and subsistence.

On the 14th of March, 1822, was published the opinion of eight members of the Academy of Practical Medicine, entitled “*Report concerning the Origin, Course, contagious Propagation, and Extinction of the Yellow Fever which prevailed in Barcelona in 1821,*” &c. The Academy consists of fourteen members. Six of them were of an opposite opinion ; and

of these six four were members of our Association. Like all the writings in favour of pestilential contagion, this Report does not contain a single proved or incontrovertible fact; and is only made up of repetitions or imitations of assertions that have been already repeatedly refuted. Some of its absurdities are incidentally referred to in this work.

As to the cordon, it was wholly a matter of traffic. At a village called Orta, through which it passed, there was a house at once *sucio y limpia*,—foul and clean,—the foul part being supposed to be within, and the clean part to be without the cordon; but of course having free communication with one another. At this house resided the medical superintendant of the cordon, who did not neglect to reap a famous harvest. Passports for Barcelona for the day were currently given by the *alcaldes* of the villages without the cordon; and the bearers of them went freely to that city, where they spent the day, and returned in the evening to the outside, to which they might have conveyed pounds of contagion, if they could have procured it. In short, it was in derision called by the people the half *picetta* cordon, half a frank being the current price of liberty of infraction. Mr. C——y, an English gentleman, assured me, that for one dollar he received a certificate of his having resided *twenty* days beyond the cordon, although he had been only *one* day from Barcelona. Nor was this system reckoned remarkable, or peculiar to Catalonia. It would have equally prevailed in any other part of Spain that might have been empested. Thus, then, it appears clearly, that if pestilential contagion really existed, and non-intercourse were really a preventive, the pro-

visions of the sanitary code would be rendered by their common infractions wholly nugatory as to any beneficial purpose ; whilst they effectually served the insidious purposes of despotism, which is their more favourite or real object.

My investigation being now finished, as far as was practicable at Barcelona ; the Manifesto of our independent Association, the Reports of the various medical corporations, the Narrative of the municipality, &c. being published ; the new Cortes being assembled ; and it being probable that the discussion of the sanitary laws would shortly take place, it was necessary to my object that I should proceed without delay to Madrid. On the evening of my departure (the 19th of March), I had the gratification of being spontaneously and unexpectedly attended at my hotel, in testimony of their approbation of my conduct, by all the British inhabitants of Barcelona who were able to walk, as well as by respectable citizens of the United States, and subjects of France and Spain. To express, in any adequate manner, my sense of the extraordinary attention, kindness, and friendship, which I uniformly experienced, during my residence in Catalonia, I feel quite impossible. Those who were pleased to bestow them may rest assured, that I shall hold them in my most grateful remembrance to the latest period of my existence ; and, as they were infinitely beyond any merits to which I can presume to lay claim, I experience additional satisfaction in imputing them to a deep sense of the transcendent public importance of the inquiry, of which I am known to have been for a long time the humble but zealous votary.

To Mr. Joseph Ryan, Messrs. Kennett and Carey, Mr. Dobree, and Mr. Killikelly and his partner, British residents of Barcelona, I owe particular obligations. Services handsomely and spontaneously conferred by Mr. Ryan, at the moment of my departure, proved afterwards of signal benefit to the inquiry.

The Academy of Practical Medicine were pleased to announce, by the transmission of a diploma through their secretary, that they had enrolled me among the number of their members.

SECTION VIII.

PROCEEDINGS UPON MY RETURN TO MADRID FROM
BARCELONA.—PROTEST PRESENTED TO THE CORTES
AGAINST ALL PROJECTS OF SANITARY LAWS.

“The Spartans and Spaniards have been noted to be of small dispatch. “*Mi venga la muerte de Spagna*’—Let my death come from Spain; for then it will be sure to be long in coming.”

BACON.

UPON my return to the Spanish Capital from Barcelona, towards the end of March, I found that the project of a code of sanitary laws of the Committee of Public Health of the Cortes, had not yet been presented to that body; but that the Government, as well as corporations, and individuals, who had, or fancied they had, an interest, direct or indirect, in the matter, were strongly urging the legislature to a speedy discussion of the subject, under the pretence that it was necessary to dispose of it before the approach of the next sickly season. It seems extraordinary, that the very circumstance of not expecting the recurrence of the disease but at a particular season, should not alone have been sufficient to inspire the adherents of the doctrine of pestilential contagion with some little distrust of the infallibility of their favourite system. I had reason to be satisfied with this state of things. The pace at which business proceeds usually in Spain, it was probable, would leave me sufficient time to finish my larger Exposition, which was in a state of considerable forwardness, and to have it translated, printed, and distributed to the members of the legislature, by

the time the project of their own Committee should be ready to be presented to them.

In the mean time, however, upon maturely considering the whole state of the matter, I judged it might be useful, by some short address, to endeavour, without delay, to attract the attention of the Cortes, and of the public, to the danger, upon so momentous a question, of being surprised into a hasty or inconsiderate decision ; the more especially as there was reason to believe, that much exertion had been used to limit, and but little to extend, the circulation of the Barcelona Manifesto, which, there appeared ground to apprehend, had scarcely found its way beyond the archives of the Committee of Public Health. In order to counteract such evils, I immediately, in the first place, set about reprinting the Manifesto of Barcelona, so that copies of it might be placed in the hands of every member of the Cortes, all the Government functionaries, literary bodies, foreign ambassadors, &c., and such of the public at large as might choose to bestow attention on the subject. This being soon disposed of, I prepared a short “ Protest against *all* Projects of sanitary Laws,” which was also speedily printed and widely diffused ; and in which, understanding that I might, without offence, dispense with the rigid forms of address so much insisted on by legislative assemblies of longer standing, I ventured to treat the subject in a less grave and more unceremonious manner, than is perhaps usual on occasions of similar importance.

Protest against all Projects of sanitary Laws.

“ This age is fertile in projects of sanitary laws.

These hopeful projects consist of expedients for binding, incarcerating, or transfixing, by means of cordons, lazarettoes, and bayonets, a certain invisible, intangible, inscrutable, inconceivable, and indiscoverable, but capricious and devouring *virus*, capable, but for these precautions, as we are told, of propagating epidemic and pestilential diseases among mankind, even to the utter extinction of human communities.

“ O thrice valiant knights of pestilential contagion and sanidad ! what obligations have you not conferred on your country and on mankind ! How have you eclipsed, in his own regions, your renowned predecessor in errantry, the illustrious knight of La Mancha ! Verily the Quixote of Cervantes was not fit to be the Squire of the Quixotes of pestilential contagion and sanidad. *He* only thought of slaying giants, rousing sleeping lions, freeing captives, succouring distressed damsels, and other such vulgar and obvious achievements. But *you*, by a complicated and unheard-of combination of machinery, and the most wonderful operations of mind, have absolutely planned the capture or destruction of an invisible power, which is every where dreaded, but no where to be found. *He* had only recourse to his sorry balsam of Fierabras, as a cure for mortal wounds already inflicted. But *you* have made the more sublime discovery of how to prevent the arrival of mortal pestilences from another world *. You have only to unite yourselves into Su-

* Whilst, in respect to yellow fever, the importation of its alleged contagion from the *New World*, is one of the facts chiefly relied on by the partisans of that faith in Spain, history informs us

preme Juntas, Superior Juntas, and Municipal and Littoral Juntas of Sanidad, throughout every province, city, town, and village, of any kingdom or country, which is *suspected* of being threatened with a visit from this *invisible* invader. Armed with full powers to supersede all the other laws of society, and even the laws of nature, you have only to direct cordons to be placed, where you suppose cordons may be required; bayonets to be planted, where you think bayonets may be useful; vessels to be sunk, burnt, or destroyed, when *suspected* of having a *suspicious* cargo on board, and especially if they have been, within the last century or two, in the Antilles; individuals supposed to be propagating or clandestinely dealing in the aforesaid invisible *virus*, to be shot or otherwise summarily put to death, without any troublesome form of trial, as such process might infect the judges, the judges the jury, the jury the audience, and the audience the rest of the community. By the seasonable murder of one or a few individuals, it is wonderful how much mischief might be prevented to the public; and if the individuals cut off, as is very probable, should happen to be smugglers, or other obnoxious characters, they will only have met with the fate which they had otherwise merited. I recollect to have somewhere seen a book entitled "Killing no Murder," which I think must have been written by some ingenious pestilential contagionist, with a view to illustrate the innocence of these massacres. The

with certainty, that between the year 1333 and the period of the discovery of America, that disease had prevailed epidemically twenty-two times at Barcelona.

Juntas will doubtless recollect how necessary it is, upon such occasion, to act with energy, and to dismiss all troublesome scruples. They will therefore, without reserve, order all animals suspected of having been within the contagious distance of any *suspected* persons, animals, or goods, from the horse, mule, or dog, to the pigeon, wren, or musquetto, to be instantly put to death, and buried, as it may not be quite certain, that pestilential contagion is not capable of being propagated even from the dead. In that case, in the hope of being perfectly secure (but, alas ! from such an agent what can ensure perfect security?) it might further be advisable to direct the buriers of the dead, who may be *suspected* of having caught the invisible contagion, to be thrust alive by means of machinery, made of articles ascertained to be non-conductors of contagion, into the graves which they have themselves dug. By the aid of such machinery, the Health Juntas might, from a distance of twenty or thirty leagues from the site of an existing or impending pestilence, safely direct, by a line of telegraphs, all the slaughter necessary to the preservation of mankind.

“ With the aid of such machinery, and with such further improvements in the art of expurgation, as the knowledge and the talents of the pestilential contagionists can scarcely fail to suggest, the Juntas may hope, in due time, notwithstanding the sneers of their opponents, to *exterminate* this inconceivable *virus* from the face of the earth—*by successively exterminating the pestiferous*. Such, indeed, would be the inevitable consequences of carrying their own doctrines into full effect. In a caricature, descriptive of

some of the most prominent events of the stormy periods of the French Revolution, the executioner, being supposed to have no more subjects for the exercise of his art, was represented in the act of endeavouring to guillotine himself. When sanitary laws shall be correctly administered according to the strict principles of the doctrine of pestilential contagion, a difficulty of a very similar nature may be expected to arise. All persons *suspected* of having had intercourse with persons labouring under a disease of a suspected character, being supposed to be buried, either dead or alive, the difficulty would be, how, in order to avoid re-infection, the last survivor should contrive to bury himself !

“There is besides a trifling objection, which, even in healthy periods, may be entertained against this infinity of sanitary Juntas. If happily their members were as invisible, intangible, inscrutable, and inconceivable, as the contagion they are employed to exterminate, although they could never succeed in capturing or destroying a non-entity, they might be at least innoxious in their operations. But they are solid substances. They are composed of flesh and blood ; and necessarily inherit, less or more, like other men, a love of fame, a love of power, a love of riches, and various passions, prejudices, and caprices. The corporate spirit, the desire of domination, the hope of preferment, natural to man, unavoidably convert such Juntas into instruments of arbitrary rule, and sources of perpetual vexation, and ruinous expenditure to communities. I am not here directing my remarks exclusively against the sanitary laws of Spain, or the individuals employed in administer-

ing them. My observations are alike applicable to all such institutions, and to all persons employed under them, in every country of the world. In my forthcoming Exposition to the Cortes, greater extension will be given to these views.

“Within a few months, two of the projects alluded to have appeared, under official sanction, in Spain ; and a third is preparing. The first in order is that of the Commission of Public Health, appointed by the Government. It is a collection, in 207 pages, of all the expedients which have ever been devised, or practised in vain, for the capture or destruction of this redoubtable contagion. In censuring, in unmeasured terms, those preposterous and pernicious laws, I beg to be understood as not meaning any disparagement to the Commissioners of the Spanish Government, who have drawn up this project, several of whom I have the honour to know, and personally esteem. Science, however, is not to be trammelled by forms, nor truth to be sacrificed to etiquette. At the present moment especially, it is incumbent on every man, who feels that he can throw some light upon the subject, to speak plainly concerning these great and destructive *opprobria* of the age—pestilential contagion, and sanitary laws.

“The second project is that of the Committee of Public Health of the Extraordinary Cortes of 1821, 2, which, with scarcely any other striking difference, possesses the advantage of being only one half as long as its rival *. The third, which we daily expect, from the

* Between the Government Commission and the Committees of the Cortes, there was in general a positive rivalry, useful to the

Committee of Public Health of the Actual Cortes, will, it is hoped, if not wholly abandoned, have the additional merit of being still further curtailed. But no curtailment, no improvement, no modification, can render laws that are essentially immoral, destructive, and unprincipled, either innoxious or tolerable. In the name of humanity and of science, then, I protest *in toto* against all such projects. *To enact laws, without first having ascertained, beyond a doubt, the existence of the evils which they are intended to remedy, is completely to invert the proper course of proceeding in matters of legislation.* To discuss projects of sanitary laws, the object of which is to prevent diseases from being propagated by means of a specific contagion, without having previously obtained some sufficient proof that such specific contagion does actually exist, appears to be a most extravagant instance of this inversion. But of the existence of such an agency in epidemic diseases, it is not in the power of any man, in any single instance, to produce such proof as can be satisfactory to the scientific inquirer, whilst the validity of the contrary doctrine has been demonstrated beyond the possibility of refutation. The system of pestilential contagion has been proved to be a system of assumptions throughout. To enact, then, upon vague or unfounded assertions or surmises, a code of laws that must infallibly occasion numerous deaths, is as gross a violation of the fundamental principles of justice, with regard to communities, as it would be in respect to

development of truth. It was only when they unhappily united, that science was sacrificed to views of personal expediency.

individuals, to shoot persons *suspected* of certain offences, without having previously inquired into the reality of their guilt. And if this be so, what must we think of laws inflicting the penalty of death for imaginary crimes, in total disregard of proof and demonstration? The Cortes will, I trust, see, ere it be too late, the danger of legislating in this manner, and abstain from worse than useless labour, even although they should thereby sacrifice the forthcoming project of their Committee.

“The proofs that contagion cannot possibly exist in any epidemic disease; that sanitary laws are therefore useless in respect to their proposed ends; and that they are besides the cause of by far the greatest part of all the sickness, misery, and mortality, which, from their first institution, have afflicted Spain from pestilence, I am now occupied in concentrating and methodizing in the form of an Exposition or Memorial for the use of that august body. There, after proving contagion in epidemic diseases to be a chimera, and the sanitary laws founded upon that chimera to cost Spain an immense number of lives and an enormous sum of money annually, I offer, if the Cortes will consent to abolish these laws, to apply such a curative process as will evince that pestilences may be reduced, in point of danger, to the level of ordinary maladies; stating, at the same time, the reasons why, under the strict operation of the system of sanitary laws, the best curative process must be unavailing.

“I presume that in the mean time, my published work upon that subject, in which the erroneousness of the doctrine of pestilential contagion, and the pernicious operation of sanitary laws, have been fully

discussed and demonstrated, and of which a copy was transmitted to the Spanish Government in October last, has been directed to be translated into the Spanish language. At the present critical moment it must be very desirable that the public, as well as the legislature, should be put in possession of every obtainable information on this highly important subject of human research. The work to which I allude contains detailed proofs of the non-existence of contagion universally in epidemic diseases, including of course those forms of pestilence improperly called yellow fever, and the plague of the Levant, which afford the sole pretexts for the maintenance of sanitary laws in the peninsula.

“It was to demonstrate the necessity of abolishing these laws, that I came from England, a volunteer in the service of truth, science, and humanity, so grievously injured by regulations intended for their benefit. Truth, science, and humanity, acknowledge no distinction of countries; and, in fighting under their banners, I am not apprehensive that I shall find myself a foreigner in Spain.

“Aware however of the stratagems to which men are apt to have recourse, when they find themselves unable any longer to defend a favourite cause by fair means, I adopt this method of announcing my intention at the present crisis, to make open and interminable war in every practicable manner upon the visionary and destructive systems of pestilential contagion and sanitary laws; trusting that, in the mean time, the public authorities will not suffer their good faith to be surprised in this matter by intrigue. The responsibility is awful, of a decision involving the fate

of at least 100,000 lives, and an expenditure of 800 millions of reals annually, if that decision should prove to be in favour of a demonstrated delusion.

“ That the questions here at issue are only fit for the consideration of medical academies, or the decision of physicians, is a great and most pernicious error. Academies (and I am not aware that medical ones ought to be excepted) are too frequently only embankments to prevent knowledge from spreading beyond certain convenient boundaries, or from diffusing more equally its benignant influence through the various classes of a community. Like the cloistered monks of old (the modern monks are *ex necessitate* comparatively gentlemen), who, whenever a ray of light broke into their cell, were ready to cry Fire ! Academicians, always retaining somewhat too much of the monkish and exclusive principle, are generally more intent on causing their *dicta* to be respected, than on ascertaining whether they be true. As well might the question respecting the existence of pestilential contagion, and the utility of sanitary laws, be referred at once to a Junta of superintendants of quarantine and lazarettoes, as to a medical academy. They are questions of fact, not of physic, of which all persons of liberal education are as competent to judge as physicians ; and even more so in proportion as they are more exempt from the influence of preconceived notions on the subject. If it were desired to have a decision in favour of the doctrine of pestilential contagion, right or wrong, there could not be a better plan than to place on the Committee of Public Health of the Cortes, physicians or academicians, who should be all contagionists. If it were desired to render the

labours of the Committee null, the plan would be to put on it an equal number of members of each opinion. But in order to ascertain the truth, the only effectual mode is omitting physicians altogether, to select a Committee wholly consisting of known philosophers, men of letters, lawyers, and logicians ; men accustomed to elucidate, not to confound ; to unravel, not to mystify ; and whose self-love could not be affected by the decision that might be given.

“ On such questions, physicians, instead of being considered as authorities from which there is no appeal, ought to be interrogated *viva voce* respecting the grounds of their opinions. They ought to be examined and cross-examined, like witnesses in a court of justice. Such are alone the means by which truth, on this subject, can be thoroughly ascertained. It has been remarked to me, by persons of good sense, that my endeavours are vain ; that there is no chance at present of effecting the abolition of the sanitary code in Spain, alleging, among other reasons, that there are nine physicians in the Cortes, all of whom are contagionists. Should the fact and the inference prove correct, it would be so much the worse for Spain. But I do not entertain any such apprehensions. The demonstration of the impossibility of the existence of contagion in epidemic diseases, and of the destructive effects of sanitary laws, being presumed to be conclusive, these nine physicians, unless they are determined to remain proof against conviction, must suffer themselves to be converted. And in the contrary case, it cannot be supposed that the Cortes generally would allow themselves to be biassed by the preconceived notions of any nine individuals,

however respectable, concerning a matter of fact of such extraordinary importance, and of which every individual deputy is as competent to judge as any physician.

“CHARLES MACLEAN, M.D.

“Madrid, Fonda de San Fernando,
29th March 1822.”

The preceding protest, of which a copy was presented to every deputy, produced even a greater sensation than I had anticipated. It set the pestilential contagionists a-writing; and in about a week, a long and angry tirade, by no means deficient in ability, was launched against me in the columns of the “*Universal*,” said to be written by one of the Government Commissioners of Public Health. By a remarkable coincidence, just about this period another member of that body, who was the expectant president of the General Direction contemplated under the proposed project, sickened and died. Those members of the Cortes who might from indolence or indifference, or a dislike to be instructed by strangers, have otherwise neglected to peruse my Protest, if there were any such, would most probably have been excited, by this vehement attack upon it, to glance at its contents. From discussion truth has nothing to fear, but every thing to hope; but on this subject discussion was not yet free in Spain; for I had previously ascertained, that neither the *Universal* nor the *Imparcial*, the only journals which I tried, would insert any articles against the doctrine of pestilential contagion: consequently, if I had inclined to have recourse to the same channel through which to reply to this attack, it would have been shut against me: but this was of no conse-

quence, as I entertained no such intention, considering that my forthcoming "Exposition" would once for all probably be found a sufficient reply to my opponents. In the mean time, the attack, taken together with the Protest, had rendered essential service to the cause. From the moment of their appearance, those who had previously never ceased to urge the Cortes to accelerate the discussion of the project of a code of sanitary laws, altered the plan of the campaign, and were either silent, or only occupied in contriving the means of postponing the discussion to another session. As, however, the power of accelerating or retarding the discussion of any subject lay with the president for the time being, and as the party who had at that period rather the preponderance in the Cortes, giving them the appointment of presidents, appeared to be favourably inclined towards sanitary laws, the discussion of the project of the code might be purposely brought forward when least expected; I therefore determined to remain in Madrid, to watch the motions of the sanitarians to the end of the session, if that should be necessary; aware that they were alive to the censure and ridicule which might be employed against improper proceedings on a subject of such vital importance to the state, notwithstanding the determination of the *Universal* and *Imparcial* to admit only arguments on the one side. Riego, conversing about the Protest, smilingly observed, "You have been ironical with us this time; in your larger Exposition you will, I suppose, be more serious." My explanation appeared to satisfy him.

SECTION IX.

EXPOSITION PRESENTED TO THE SPANISH CORTES,
 DEMONSTRATING THE NON-EXISTENCE OF PESTI-
 LENTIAL CONTAGION, AND THE PERNICIOUSNESS
 OF SANITARY LAWS.

“The schools astonish’d stood, but found it vain
 To combat still with demonstration strong.”—THOMSON.

INTRODUCTION.

SANITARY laws are expressly founded on the belief in the existence of a specific contagion, *virus* or poison, as the cause of epidemic diseases. Their precise objects are, to prevent the occurrence of these maladies, by hindering the exportation, importation, and spreading of the pretended cause: how far their operation has been in these respects efficient, we shall presently have occasion to judge. As neither the merits of these laws, nor the validity of the doctrines from which they have emanated, have ever until lately been made the subject of regular investigation, they consequently remain at this day, as at the period of their adoption, the offspring of implicit faith, *not* of rational conviction: whilst the various enactments of health police, dictated by these laws, are on the one hand extolled as the perfection of human wisdom, and the undoubted means of preventing the extinction of the human race; they are regarded on the other hand as the extremity of human folly, and the cause of at least nineteen-twentieths of all the evils which

it is their professed object to avert. Under so complete an opposition of opinions, and under the present very critical circumstances of Spain with respect to epidemics, these are surely matters which demand, from a popular legislature, the most prompt, scrupulous, and deliberate investigation: delay, or an erroneous decision, would be almost equally fatal; even in one season (the health laws remaining in operation) many of the finest cities in the kingdom might be irretrievably ruined, and the whole state shaken to its very foundations. To indicate to the legislature the sure means of averting those evils, and the necessity of employing them, is the design of this memorial; in which I propose to show that the health laws are founded wholly on a delusion, or, in other words, that contagion in epidemic diseases does not and cannot possibly exist; that, in other respects, these laws are in the highest degree destructive in their operation, and that they ought consequently to be forthwith abolished.

In an association of fifteen physicians, native and foreign, spontaneously formed at Barcelona, in which it may be said that national, professional, and individual prejudices, jealousies, and animosities, were all sacrificed at the shrine of truth, I had the honour, on the 21st of February last, of concurring in a joint Manifesto, the result of two months calm and solemn discussion, respectfully submitting to the Cortes of Spain our decided conclusion, that the fever which afflicted that city in 1821 did not depend upon contagion; and detailing several of the numerous facts upon which that conclusion is founded. In so far as that particular epidemic is concerned, the proof of

the non-existence of contagion there given, will be found complete.

But it is essential to observe, that an individual epidemic, however considerable in itself, is, to the sum total of pestilential maladies, only as a grain of sand upon the sea-shore ; and that the proof of the non-existence of contagion in any particular epidemic, however perfect that proof may be, cannot invalidate the doctrine of contagion generally in epidemic diseases. For this reason, and in order to execute in the most beneficial manner for science, for the Spanish nation, and for humanity at large, the important and delicate mission, with which His Catholic Majesty was pleased to intrust me, I deem it necessary, besides my share in that joint representation, to address a separate Memorial to the National Congress, demonstrating, upon the broad basis of general principles, the impossibility of the existence of contagion, universally, in epidemic diseases.

In addressing the freely chosen representatives of a free people, on a subject the most momentous that can engage the mind of man, and almost inextricably enveloped, as it is, in the prejudices of ages, I will speak the unqualified language of truth, which alone is fitting for them to hear or for me to deliver.

The inquiry concerning epidemic diseases, under the present ideas respecting them, may be properly divided into three branches :

1. Pestilential contagion and sanitary laws.
2. The real causes and proper means of prevention of epidemic maladies.
3. Their nature and cure.

Of these three branches of inquiry, the first natu-

rally takes the lead, not only as being in itself by far the most important, but because, until the question, which it involves, be correctly decided, no satisfactory discussion or research can take place respecting the others. The decision of these questions, therefore, notwithstanding the exclusive importance that has been attempted to be given to the treatment, where no cure was ever performed, may be regarded as many times more essential than any thing that can be done, as matters are situated, towards either the prevention or the cure. As the belief in contagion, with the numerous consequences of that belief, constitute or give rise to adventitious causes of sickness, which, in epidemics, amounting to pestilence, are twenty times more destructive to mankind, than all the proper causes, physical and moral, of these maladies combined; it follows, that to effect its renunciation would be at once to obviate nineteen-twentieths of the sum total of the causes of pestilence, where this delusion prevails, and consequently to avert in the same proportion the calamities occasioned, under the existing system, by this class of maladies. On the other hand, it is equally certain, that, unless this doctrine be renounced, and the laws and regulations founded upon it be abolished, the proper causes of epidemics cannot be obviated, nor efficient means of cure applied. The adventitious causes, which are presumed to be as nineteen in twenty, being kept in constant operation, to attempt to obviate the proper causes, which are presumed to be only as one in twenty, or to endeavour, by the application of remedial powers, to remove the effects of the causes thus artificially maintained in permanent operation, would be equally idle.

In the application, on the one hand, of remedies for the removal of a disease, whilst, on the other hand, nineteen-twentieths of the sum total of its causes are kept, *by law*, in a forced state of operation, there is a *prima facie* absurdity. But demonstration of the absurdity being given, there is in the continuance of the practice something much worse. There is deliberate destruction to the physician who incautiously places himself in such a predicament, as well as to his patients, in order that a certain privileged set of persons may be exempted from the apprehension of an ideal danger. Against this most revolting system of egoism, I deem it my duty here to enter my solemn protest; as well as to decline becoming a party to the maintenance of the delusion, by any attempt, until these obnoxious health laws shall have been repealed, to apply a mode of cure, which, in similar diseases, I have experienced to be, under other circumstances, efficient. But if, in consequence of the demonstration which is here afforded, the Cortes, upon whom alone it depends, should consent to abolish laws shown to be founded on a chimera, I will, on my part, without hesitation, undertake, with their support, to apply such a curative process, in the first epidemic that occurs, as will evince, that, in point of danger, those diseases may be reduced to the level of ordinary maladies.

It can scarcely be necessary to advert, on the other hand, to the enormous responsibility, on the part of the legislature, which, under the actual circumstances of Spain, must and ought to await any partial, slight, or inefficient investigation of a subject of such paramount importance. I respectfully submit to the con-

sideration of the Cortes, that it cannot be deemed sufficient, on such a subject, that the important questions at issue should be determined according to the mere opinion of a Committee, principally perhaps composed of physicians or others who may have already deeply committed themselves on the subject of pestilential contagion. And still less satisfactory would it be regarded, if a project of health laws should be discussed and passed, without any previous inquiry into the existence of the evil, which they are intended to remedy. To establish a code of sanitary laws, without first ascertaining the existence of contagion in epidemic diseases, would be as great an injustice towards the community, as it would be towards individuals to *shoot* them, when *suspected* of having committed a crime, without any previous proof of the reality of the imputed guilt.

Some discoveries may lie dormant for ages without any positive mischief resulting to mankind from their non-application to the affairs of life. But the case is widely different with regard to the principles developed in the present Memorial. Besides extensive and numerous injuries to many others of the best interests of communities, every delay, even of a single day, in their application to practice, must necessarily be productive of an immense sum of sickness, misery, and mortality, wherever epidemic diseases prevail; and it is obvious, that if the Cortes should persevere, in mere deference to a prevailing delusion, and in defiance of incontrovertible facts, in the maintenance of those preposterous enactments, of which the mischievous effects are here exposed, they would render themselves morally responsible, not only for the injury directly done to Spain, but also for that indirectly done to

other nations, by the influence of so fatal an example emanating from a body, of whom the love of free inquiry, and an exemption from vulgar prejudices, are expected to form the principal characteristics.

For my part, feeling the indispensable necessity of duly impressing the public mind with the extraordinary importance of this inquiry, I shall, even at the risk of appearing tedious, or of making repetitions, endeavour to place the subject in a variety of points of view.—Let us suppose mankind, as has been calculated, to consist of a thousand millions; that of these, three in the hundred, or thirty millions die annually of all diseases; and that of this number, one half, or fifteen millions, fall a sacrifice to epidemic maladies. The proportion of these deaths that happen in Christian communities, where alone the adventitious causes of mortality prevail, let us roundly estimate at one half, or seven millions five hundred thousand; and let us suppose that in epidemics amounting to pestilence, the concurrent causes of sickness and mortality, dividing them into twenty parts, are operating in these communities in some such proportion as the following:—

The proper causes	1
The adventitious causes, moral and physical, viz. terror from the belief in contagion, from the operation of sanitary laws, and from the surrounding scenes of misery, desolation and death	12
Compulsory exposure under sanitary laws to the action of the noxious air, and of the other principal proper causes of epidemic maladies	4
Various other consequences of that belief and of these laws; as, concealment of sickness, desertion of the sick, want of medical aid, and want of food, &c. &c. &c.	3
Sum total of the adventitious causes	—19
Sum total of the proper and adventitious causes	20

In the details of any estimate of this kind, it would be absurd to pretend to any thing like an approach towards accuracy. The variations to which the combinations, proportions, and degrees of these causes are perpetually liable, or rather the impossibility of their being precisely the same in any two epidemics, at any two periods of the same epidemic, in any two persons at the same period, or in the same person at different periods of the same epidemic, would render it at all times quite impossible to form a scale of proportions that should be found generally applicable. But it will be sufficient for my purpose here, if this sketch should serve as an illustration of the principle. Thus, it will result from the principle of this computation, that of the seven millions and a half of deaths that are supposed to take place annually in Christendom, from epidemic diseases, 7,100,000 or nineteen-twentieths are owing to the adventitious causes; whilst only 370,000 or one-twentieth depend upon the proper causes of pestilence.

Applying this principle to Spain; if the estimate which has been made, that a million of lives have been sacrificed to epidemic diseases in the space of four years, be correct, it cannot be an exaggerated calculation, that in the whole of the twenty-two years which have elapsed of the present century, the deaths from that cause must have considerably exceeded two millions, being at the rate of about 100,000 a year.—Thus, pursuing the same principle of computation, there must have annually perished, during that period, in Spain, 95,000 persons, victims of the belief in contagion, and of the operation of sanitary laws; and such, we have a right to presume, will be about the average

number that will perish in future, owing to the same causes, the seasons being similar, and the belief in pestilential contagion, together with the operation of sanitary laws, being maintained in their full integrity.

But if, as is probable, this estimate of four years mortality in the Peninsula has been formed according to returns, there is reason to believe, from the manner in which these returns are prepared, that it is considerably under-rated. In the returns during the fever of Barcelona, in 1821, I find one palpable source of fallacy, of which the result must have been to give a mortality more than one-fourth less than its real amount ; and, for obvious reasons, this is the side to which the exaggeration seems generally inclined to run. An inquiry, founded upon the principles which I have stated, concerning the extent of the mortality, which since the establishment of sanitary laws in Spain must have taken place in that country, in consequence of their operation, could not fail to be productive of curious and interesting views. If I be not greatly mistaken, it would be found, that the proportion of deaths from that cause has increased of late years in the precise proportion in which the administration of sanitary laws has increased in rigour and absurdity. But, besides want of leisure, an inquiry of this kind is not necessary to my immediate object. The illustration of this part of the subject is sufficiently complete. From the whole, it results, that in Christendom, under the lowest computation of mortality from the adventitious causes of pestilence, *millions of human beings are ANNUALLY the victims of a single delusion !*

Conclusions of this importance, if they were even

but weakly supported by argument, might surely be deemed deserving of the most attentive consideration of every class of the community. But being, as I presume to maintain, upheld by irrefragable demonstration, the public of all nations have a right to expect that they should be subjected, by every Legislature and by every Government, to the most anxious, careful, deliberate, and unbiassed scrutiny. If, whilst the error was yet unexploded, Legislative Bodies and Governments could not fairly be censured for not renouncing the common delusion, its refutation being effected, they can no longer be held exempt from blame for not immediately renouncing it, and abolishing the laws founded upon it. To continue now to maintain them, would amount to a criminal perseverance in error.

PART I.

*of the Exposition to the Cortes.*PROOFS OF THE NON-EXISTENCE OF PESTILENTIAL
CONTAGION.

“ Say, shall the puny champions fondly dare
To wage with force like this scholastic war ?”

WARTON'S *Triumphs of Isis*.

THE major proposition, that, consistently with the actual laws of epidemic diseases, pestilential contagion cannot possibly exist, includes the minor ones, that a specific contagion, or *virus*, did not form the cause, or any part of the cause, of those of Barcelona, Tortosa, Palma, &c. in 1821, or of any of the epidemics which have antecedently occurred in the Spanish Peninsula, or elsewhere; as well as that, until these laws change, it cannot possibly concur to form the cause of any future epidemic, in any age or nation. The proof of the major proposition is, therefore, all that is here required.

SECTION I. (*being Sect. X. of this work.*) *

ORIGINAL DEMONSTRATION OF THE NON-EXISTENCE
OF PESTILENTIAL CONTAGION.—THE SUBJECT
MUST BE CONSIDERED AS A WHOLE.

“Dissipating all
Opinion’s feeble cov’rings, and the veil
Spun from the cobweb fashion of the times.”

AKENSIDE.

THE existence of contagion, in epidemic diseases, is not a question which is now to be proposed for solution. It is already solved. To regard it as problematical, or uncertain and disputable, as the pestilential contagionists still do, or affect to do, is to be ignorant of much of what has been done and written on the subject. The impossibility of the existence of contagion universally, in epidemic diseases, is a principle which I have, in various works and upon various occasions, already established upon an immoveable foundation. The present demonstration, therefore, is not even a new probation of a new theorem; it is but the repetition, in a succinct form, of the *data* and the reasonings by which I had originally established this principle in greater detail. (Some details are

* In order to obviate confusion or mistake, the Sections remain as in the original “Exposition;” but they are also numbered continuously with the Sections of this work, as now forming part of it. The *first* Section of the “Exposition” forms the *tenth* of this work, and so on.

omitted here, as being stated in substance in Sect. I.) Consequently it is the substance of my previous works and researches, concentrated and methodized, and further corroborated and enriched by such new or striking facts as have been presented by the histories of the epidemics of Barcelona, Tortosa, and Palma, in 1821, which I have now the honour to offer to the consideration of the Cortes.

In this discussion, the history of the fever of Barcelona, &c. is necessarily but a matter of secondary consideration; because, in regard to the question of contagion generally, in epidemic diseases, the decision of which can alone determine the fate of the sanitary laws, the proofs must entirely depend upon general principles, and cannot be determined by the phænomena of any particular epidemic. It cannot be effected in any other manner than by a consideration of the phænomena of this class of diseases as a whole. Whilst partial proofs can, in regard to the general proposition, be of no avail, they are in effect an implied admission of the existence of contagion generally in epidemic diseases, from which the particular ones in question would only seem to be cited as so many exceptions. Proof of the non-existence of contagion, in the fever of Barcelona, Tortosa, or Palma, in 1821, would only be good in as far as concerned those particular epidemics. It would not be received as proof of the non-existence of contagion in epidemics universally, or in that species of epidemic called yellow fever generally, or even of any subsequent epidemic of the same denomination and description, even in the same town. Thus, although the fever of Barcelona in 1821 has been proved not to be contagious, it

would not be deemed a necessary consequence that a similar fever, occurring in that city in 1822 or 1823, would not be contagious, whilst the belief prevails that some epidemics do, and that others do not depend upon that cause. It would even be of no avail, in respect to the general proposition, to prove the non-contagious nature of yellow fever invariably; for the dispute would then be, whether the epidemic prevailing was or was not yellow fever. It might be confounded with the plague of the Levant, or with common typhus, ship, hospital, or jail fever; and whilst these are deemed to be contagious, recourse would continue to be had to the usual means of preventing their presumed contagion from spreading. Under such circumstances, there would be no means of determining whether a prevailing epidemic belonged to the supposed contagious or non-contagious class, but by the history of its accompanying events; and this could not be ascertained until all the mischief of which it was capable had been done, *i. e.* until its termination. The knowledge would come too late for that particular epidemic, and be of no use on any future occasion. Thus, at the commencement of every succeeding epidemic, the same alarms, the same uncertainty, and the same confusion, would prevail, as if its predecessor had not been proved to be non-contagious. Whether the prevailing disease did or did not depend upon that cause; whether, if contagious, the *virus* was of domestic origin, or foreign importation; and, if the latter, whether it was a native of Europe, Asia, Africa, or America;—would be subjects of inexhaustible dispute, and remain for ever undecided. In this state of uncertainty, the report of

an epidemic in any distant country, as plague in Africa or Egypt, yellow fever in America or the West Indies, or *cholera morbus* in the East Indies, would be deemed sufficient ground for rigidly enforcing sanitary laws, from the Pillars of Hercules to the shores of the Baltic.

It must be obvious, then, that the only manner in which this uncertainty can be removed, is by considering the subject of epidemic diseases as a whole ; by regarding the question of contagion in these maladies upon the broadest basis and the most extended scale ; and by investigating their causes, as deduced from their history, from their proper laws, and from the very nature and essence of things.

SECTION II. (XI.)

OF EPIDEMIC DISEASES.

“ Diseases which depend upon other causes never depend upon a specific contagion.”

“ What seasons teem
With what diseases ; what the humid south
Prepares, and what the demon of the east.”

ARMSTRONG.

RESPECTING points which are to become subjects of discussion or of controversy, it is essential, in order not to be misunderstood, to employ precise terms, and to have definite ideas. It appears proper, therefore, to explain, at the outset, wherein consists the

difference between epidemic diseases and those which depend upon a specific contagion.

They differ from each other in respect to their causes, to their laws, and to their phænomena.

Epidemic diseases are maladies of an indeterminate form, produced by causes capable of acting simultaneously upon the whole, or any given portion of a community, and of affecting the same person repeatedly, even in the same epidemic and the same season. A specific *virus*, or contagion, can form no part of those causes. (Chap. 7.) *

The laws, by which they are to be distinguished from those contagious diseases with which they have been sometimes confounded, are numerous. They will hereafter be stated.

The phænomena of epidemics are so different, in different persons, as to have obtained for them the appellation of Proteian maladies. This difference depends upon the almost infinite variety of combinations, proportions, and degrees, in which their causes may be applied. Hence, whilst all epidemic fevers are in reality nothing else than modifications of the *causus*, or *febris ardens* of the ancients, an almost endless variety of names has been given to them in modern systems, to the great detriment of science. (Chap. 41.)

Besides every form of idiopathic fever, as those which have been called plague, typhus, yellow, scar-

* The references here made are to the Chapters of my work entitled "Results of an Investigation respecting Epidemic and Pestilential Diseases," &c. which was in the hands of the Committee of Public Health of the Cortes.

let, jail, hospital, and ship fever, &c., diarrhœa, dysentery, cholera morbus, scurvy, &c., may be ranked amongst epidemic diseases. The affection of the blood, and circulating system, being the chief characteristic of epidemic maladies, the dissimilarity of their phænomena, in other respects, depends upon the affections of the other organs ; which again depend upon the various combinations, proportions, and degrees, duration and intensity, in which the numerous causes which concur to produce these maladies, have been operating.

The causes, the laws, and the phænomena of epidemic and contagious diseases being so dissimilar, or opposite, those diseases themselves are necessarily incompatible and inconvertible. (Chap. 11.) That a disease, capable of being propagated by a specific *virus*, can never be produced by any other cause ; and that a disease, produced by other causes, can never be propagated by a specific *virus*, are indeed self-evident propositions. The idea of a spontaneous generation of a specific *virus* in the progress of an epidemic malady, is much too gross for animadversion. Between epidemic and contagious diseases, then, there is a clear and wide distinction. Some persons, following literally the etymological interpretation of the word “epidemic,” have imagined that small-pox, when considerably diffused, ought to be so considered. But, in order to deserve to be so ranked, a disease must obey all the other laws which are peculiar to this class of maladies, as well as that of diffusion. Small-pox, measles, or lues venerea, may affect a great number of persons at once ; but however diffu-

sed, they can never, for that reason alone, be entitled to the appellation of epidemics.

In epidemic diseases, recovery or death may take place, at every period from the first minute or hour to several weeks or months.

The sick are liable to successive relapses.

SECTION III. (XII.)

OF CONTAGIOUS DISEASES.

“ Diseases which depend upon a specific contagion never depend upon any other cause.”

CONTAGIOUS diseases are maladies of a determinate form, produced by a specific *virus*, passing from person to person ; from persons to goods, and from goods again to persons ; by means of the air as a vehicle ; or by the process of inoculation. They are never produced by any other cause than a specific *virus*. The contagion is not obscure or doubtful ; and is capable of taking effect in any air, at any season, or under any circumstances.

They are general and local. Of the former, small-pox and measles ; of the latter, gonorrhœa, chancre, and the itch, are examples.

Contagious *general* diseases, with which alone epidemic maladies may be confounded, are not capable of affecting the same person more than once *. The

* It must be unnecessary for me to say a word in refutation of those absurd traditions, respecting the occurrence of small-pox more than once in the same person, which first obtained among

periods of fever, eruption, recovery, and death, &c., are all determinate. They never kill speedily, or at once. According to Sydenham, the usual period of death, in small-pox, is from the 8th to the 12th day.

There cannot be any relapses.

SECTION IV. (XIII.)

SYSTEM OF PESTILENTIAL CONTAGION.—ITS INHERENT ABSURDITY.

“How wilt thou reason with them, how refute
Their idolisms, traditions, paradoxes ?”—MILTON.

“But ye are forgers of lies, ye are all physicians of no value. O that ye would altogether hold your peace ; and it should be your wisdom.”—LEVIT. xvii. 4, 5.

AMONGST the adherents of this system, there has been throughout, not only a total disregard to all the forms of scientific probation, but even to the very appearances of probability. They have taken upon themselves, and been suffered by others, to assume their *data* at every stage of the detail. Upon the very face of the doctrine, and as it has been maintained by the most eminent and the least inconsistent of its advocates, the system of contagion, in epidemic diseases, is so preeminently absurd, that, but for the calamitous consequences which it continues to

the vulgar from ignorance, and were afterwards attempted to be accredited by some of the faculty for a purpose ; since no philosopher can believe them, and since, if they were worthy of credit, they would still only be exceptions.

produce in the world, I should have considered it a waste of time, as well as an insult to the understandings of mankind, to make it the subject of formal investigation. But the extent of the mischief which it annually occasions throughout Christendom, has conferred on it an extraordinary importance, and rendered it an object worthy of the utmost attention of every enlightened man, and of every civilized nation. A belief, however absurd in itself, to which, besides incalculable injury to many others of the best interests of communities, millions of human lives are unquestionably the annual sacrifice, demands the most prompt, scrupulous, and deliberate investigation. Whilst the ravages of the fevers of Barcelona, Tortosa, and Palma, in 1821, are yet fresh in the recollection of the world, an additional elucidation of the baneful effects of that stupendous delusion, such as the history of those ravages will afford, cannot but be a powerful appeal to the hearts and understandings of mankind.

To give any adequate description of a system, which, being founded on fiction, is necessarily liable to incessant changes, according to the caprice or fancy of its respective adherents, is no easy task. It consists throughout of a series of gratuitous assumptions or mere chimeras. The first of this series of chimeras, is, that there actually exists an invisible, intangible, inscrutable, inconceivable *virus*, of so undiscoverable a nature (with the properties of which nevertheless the initiated are perfectly acquainted) as to have, for thousands of years, eluded the utmost vigilance of vulgar research ; but capable of propagating, at particular seasons of the year, and under particular circumstances only, all sorts of *epidemic* diseases ; and, what

would seem to the uninitiated still more surprising, that this invisible, intangible, inscrutable, inconceivable power is capable of being arrested, in its secret, mysterious, and devastating course, by the physical restraints of walls, cordons, bayonets, quarantines, and lazarettoes! The next series of assumptions is, that this unknown and incomprehensible power is endowed with the faculties of self-generation, self-annihilation, self-resuscitation, self-transportation, self-propagation, and an immense variety of other capabilities, no less wonderful, which it condescends to exercise for the destruction of mankind. The intimate acquaintance which the pestilential contagionists have, by inspiration it must be presumed, obtained, respecting the humours and caprices of this eccentric agent, is truly astonishing. Amongst other freaks, they have discovered that it sometimes buries itself in rags, in a dilapidated wall, or conceals itself, perhaps for a quarter of a century or two, in a feather-bed, in some lumber-room, or a garret; after which, feeling a new thirst for slaughter, it sallies forth, like a giant refreshed, and before walls, cordons, and bayonets, &c., can be brought into efficient operation, by its active and sagacious enemies, will perhaps have destroyed whole communities. Like every thing else relating to this wonderful agent, its susceptibilities for different bodies is surprising and unaccountable. This has been so nicely calculated, that all the objects in nature, considered in regard to their susceptibility for the matter of pestilential contagion, have been divided into three classes, viz. susceptible in the first degree, susceptible in the second degree, and non-susceptible. The individual articles comprehended in this singular

classification are to be found enumerated in various official records of various countries. The articles susceptible in the first degree are the foulest, the most mephitic, and the impurest objects in nature. These objects of course are its delight; and their united influence is fatal to all who come in their way. From its combination with articles susceptible in the second degree, there result epidemics of the second order. With objects not susceptible it cannot of course unite. Amongst these is pure air, in the presence of which it is either immediately suffocated, or affected with such agonies, as to put a period to its existence. Although it can laugh at cordons, bayonets, and lazarettoes, it has an unfeigned horror at pure air; a remarkable instance of which occurred last season in Catalonia. After having made good its lodgment in Barceloneta and the lower part of Barcelona, the alleged contagion of 1821 never appeared to extend its influence to Sarria, Gracia, or any of the other neighbouring villages, notwithstanding an uninterrupted communication, nor even to the upper walls of Barcelona itself; although in 1652, being in a different humour, it attacked the inhabitants of Sarria and of the adjacent villages most furiously, as we learn from a very curious representation of the event still to be seen in the garden of the Capuchin convent at Sarria, the design of which was obviously to place the prowess and humanity of the Capuchin friars in a conspicuous point of view. Famine was the chief ostensible cause of this pestilence.

The contagionists who are initiated into the mysteries, and acquainted with the secrets, of this inscrutable agent, although they are quite satisfied that,

upon the recent occasion, the contagion made its voyage to Barcelona in the *Tallapedra* or *Grand Turk*, or some other vessel from the Havannah, have neglected to inform us whether it was a new *virus* self-generated, or an old one self-resuscitated, or an erratic contagion which had been for centuries circumnavigating the globe. With such an immense variety of objects in the classes of susceptible articles, and such a great number of shipping at their disposal, as commerce and navigation supply, the pestilential contagionists can never be at a loss to assign innumerable means, by which any presumed contagion may have been imported. In large cities the chief difficulty will be the distraction occasioned by this very variety. But this may be easily surmounted; for then, instead of one or a few, there will be a choice of a million of sources, all equally probable.

In viewing the manner in which the pestilential contagionists have thus been accustomed to proceed, from assumption to assumption, in endless succession, each surpassing the other in absurdity, I find it not always possible to be serious. In all epidemics, they have pretended to depict, with mathematical precision, the exportation, course, importation, or domestic origin and progress, of a contagion which they have never proved to exist in any. In Spain, it has been usual to give the credit of the origin of the presumed contagion of epidemics to South America, and more especially to the Havannah; although we learn from history, that, of 32 epidemics, which have prevailed in Barcelona between the years 1333 and 1803, twenty-two happened previous to the discovery of the New World. At the period of that discovery, there

existed no disputes respecting this matter, the system of pestilential contagion not having been invented until about half a century later.

There is one point on which I am rather curious, and wish to have an explanation from the pestilential contagionists. They are no doubt of opinion, for it is conformable to the principles of their doctrine, that the contagions of plague, typhus, yellow, scarlet, jail, hospital, and ship fever, dysentery, cholera morbus, &c. &c. &c., are all of different kinds. Recollecting that a facetious writer on both sides of this question (Dr. Bancroft) was, upon a certain occasion, very much puzzled to deduce what would be the result of the meeting of the *two contagions* of plague and typhus in the same person, I would, in humble imitation, propose it as a question to the most experienced casuists of the party, "What would be the probable results of the meeting of the contagions of all known epidemics; i. e. of twelve, fifteen, or twenty non-entities in the same person?"*

Such is the picture of the system, which was destined to form the basis of a code of laws, having an extensive influence over the lives and properties of mankind: although the colouring may seem high, the subject unfortunately scarcely admits of exaggeration. Will posterity credit the existence of the doctrine here described, and of the laws founded upon them?

* To explain the allusion to Dr. Bancroft's advocating both sides of this question, it may be proper to observe, that he is about equally strenuous in *asserting* the existence of contagion in typhus and plague, as he is in *denying* it in yellow fever; and about equally deficient in evidence of a proper kind.

or, if they should, will they not be apt to infer that a great part of the physicians of the present and last generations (I do not limit the observation to those of any particular country) were far advanced in insanity or infatuation?

SECTION V. (XIV.)

ORIGIN OF THE SYSTEM OF PESTILENTIAL CONTAGION.

“It was gravely said by some of the Prelates in the Council of Trent, where the doctrine of the schoolmen bare great sway, that the schoolmen were like astronomers, which did feign eccentrics and epicycles, and such engines of orbs to save the phænomena, though they knew there were no such things.”—BACON.

ALTHOUGH a doctrine be neither the less nor the more true, nor the less nor the more meritorious, on account of its antiquity or its novelty, yet the circumstances attending its introduction into the world may contribute to throw considerable light upon its character.

It is most certain, that the doctrine of pestilential contagion is not to be met with in the works of the ancient physicians; it was entirely unknown to them. Hippocrates wrote whole books upon epidemics, but he does not mention contagion. The first traces of it which we meet with, are in the “Tales” of Boccacio; the first methodical treatise, in the work of Fracastorius, entitled “De Sympathia et Antipathia, et de Contagione et contagiosis Morbis,” Venice, 1546. It being at that time an object with the See of Rome to translate the Council of Trent to Bologna, this

was effected by persuading the Fathers of the Council that a *contagious epidemic* prevailed at Trent, the contagion of which Fracastorius affirmed "*was particularly dangerous to persons of rank.*" Persons of quality were then susceptible articles in the first degree; and the Fathers of the Council of Trent were almost all persons of quality. But now, in the revolutions of human affairs, the poor, untitled, and destitute, have risen to the highest place in the scale of susceptibility; whilst persons of rank and fortune have nearly descended to the degree of non-susceptibles: yet we are told of "a received doctrine"!

Thus did the delusion of contagion in epidemic diseases originate in, as it has since been cherished and extended, and is now maintained by, political expediency. The doctrine was soon regularly erected into a system, and practically applied to the affairs of life: it has become a species of medical religion, and been taught in the universities and schools of physic as a part of education. From the Universities of Italy it pervaded other states of Christendom: but, notwithstanding the assertion of the London College of Physicians that it was believed by the ancients in the time of Hippocrates and Thucydides, it has assuredly never formed a part of the creed of any Pagan, Mahomedan, or Hindoo nation. By the terror which it inspired among the ignorant, the impediments which it threw in the way of investigation among the Faculty, and the arbitrary power with which it armed Governments, it was a delusion singularly calculated to perpetuate its own existence. These circumstances not only arrested improvement, in respect to epidemic diseases, but smothered pre-existing knowledge, occa-

sioning a positive retrogradation. Some eminent physicians of Italy, of the times immediately succeeding, as Mercurialis, Rudius, Sanctorius, Septalius, &c., were not indeed blind to its demerits or novelty; but the infallibility of the Pope and the power of the Inquisition were too formidable to be questioned, much less to be opposed, by mere cultivators of science; and pestilential contagion was firmly established by the highest authority. See "Results," &c. vol. i. chap. iii. p. 164.

When we reflect upon the advantages of this doctrine, in affording to the ignorant and indolent of every class a ready and summary explication of all the phænomena of epidemics, and to despotic Governments, that choice implement of arbitrary rule, a plague police, we cannot wonder that it should have continued to be as eagerly maintained, as it was originally adopted; or that, when once established, a great reluctance should have been evinced by those whose views it served, to admit of a *bona fide* and efficient inquiry into its disputed validity. The restrictions emanating from the belief in contagion were first imposed by the Venetian oligarchy; and boards of health, and quarantine and lazaretto establishments were multiplied along the shores of the Adriatic; they were afterwards adopted in succession by other Christian countries: but in no case had any previous inquiry been instituted, by the constituted authorities of any country, into the validity of the doctrine upon which these precautions were founded. The necessity of restrictions being taken for granted, the only questions have been as to the extent and severity of those that should be imposed.

SECTION VI. (XV.)

THE ABSENCE OF ALL PROOF OF THE EXISTENCE
OF PESTILENTIAL CONTAGION IS ALONE SUFFI-
CIENT PROOF OF ITS NON-EXISTENCE.

“ This controversy of itself sufficiently evinces that there is no proof of the existence of pestilential contagion ; and if an agent so remarkable did exist, there is no probability that it would have remained so long unproved.” P. 216.

THE contagionists affect to say that there are two opposite systems, the one of pestilential contagion, and the other of non-contagion, alleging that they are equally problematical. But this is downright sophistry. There is but one system—that of pestilential contagion ; and to deny its truth is not to erect a system of an opposite nature. According to correct rules of philosophizing, not only has every one a strict right to conclude, but he is bound to conclude, that contagion has no existence in epidemic diseases ; for the sole reason, that its existence has never in any case been proved : “ *de quid non apparentibus, et de quid non existentibus, eadem est ratio.*” On a near examination of this subject, we find that the only species of evidence which the contagionists have been able to bring forward in favour of their system, consists in tradition, testimony, assertion, and authority, which have long been regarded as constituting no proof in affairs of science. Although it is nearly

three centuries since the invention of that doctrine, no proof of a nature which ought to satisfy the scientific inquirer has, in any instance, been adduced of an epidemic disease being propagated by a specific contagion. Could such a proof indeed have been given, can it be believed possible that it should have escaped the penetration of Hippocrates, and the other eminent physicians of antiquity to whom such a cause of sickness was unknown? Or, have diseases which were in their time epidemic changed their nature, and become in modern times contagious? Can it be thought less improbable, that all proof of the fact should have hitherto, in every instance, eluded the vigilance of those modern physicians, who have, with such an abundance of zeal, advocated that doctrine? The simple fact of contact, upon which the contagionists seem principally to rely, can be no proof of propagation; on the contrary, the deductions from the results of communication with the sick, are unequivocally on the opposite side. This is indeed a most palpable piece of sophistry. Where contagion really exists, there can be no difficulty in detecting its presence; or, rather, it is impossible not to perceive it. It did not require the evidence of inoculation to convince all the world that small-pox depends upon contagion, and never upon any other cause. This controversy of itself sufficiently evinces that there is no proof of the existence of pestilential contagion; and if an agent so remarkable did exist, there is no probability that it would have remained so long unproved.

SECTION VII. (XVI.)

PROOFS, FROM DIRECT AND POSITIVE FACTS, OF THE
NON-EXISTENCE OF PESTILENTIAL CONTAGION.

“ Here is the truth, if truth may suit your ear,
And prejudice have left a passage clear.”—COWPER.

EVER since the invention of this doctrine, the plague of the Levant has been considered, by Christians, as at once the most contagious and the most fatal of disorders. A few direct facts will be sufficient to set this question at rest, as well with respect to that as to every other form of epidemic.

Epidemic diseases do not take place, under the most intimate intercourse with the sick, beyond the circumscribed sphere of the atmospheric influence which produces them ; *i.e.* they never take place at all from intercourse with the sick. (Some facts and observations are here omitted, as being in substance a repetition of that part of my evidence before a Committee of the House of Commons to be found in Sect. III.)

It is a notorious fact, that in Egypt the plague ceases at a determinate period, almost precisely on the 24th of June, or St. John's day ; and that the Christian inhabitants, on that day, regularly sing *Te Deum* for their deliverance. It is also a fact, that “ immediately after St. John's day, the clothes of the many thousands that have died during the continuation of the plague (at Grand Cairo) are *handed*,

bought, put on, and worn, without any apprehension of danger ; and though these consist of furs, cotton, silk, and woollen cloths, no accident happens to those who wear them." (*Brucé's Travels*, and *Russell's Treatise on the Plague*, p. 267, note.) The same thing happens with respect to the clothes at Smyrna, Aleppo, and all the other towns of the Turkish empire which are subject to epidemic maladies. These clothes are in a constant state of transfer from the dead to the living. Clothes are supposed capable of conveying the supposed contagion of epidemics, and are known to be capable of conveying contagions that have a real existence, as that of small-pox. But the plague is an epidemic capable of affecting the same person repeatedly. Under these circumstances, if it were contagious, it would be in a constant state of circulation in the Turkish empire, whilst an individual of that community remained alive ; and being capable of transportation, it would not terminate until all the accessible portions of mankind were annihilated. Yet none of these phænomena happen.

The plague of the Levant begins, proceeds, and terminates, in the usual manner, and with great regularity, at the usual seasons, observing all the ordinary laws of epidemics. In 1819, these facts were all proved in evidence before a Select Committee of the British House of Commons. They are familiar to every one in the Levant ; and yet, in the face of them, our understandings still continue to be insulted with the gross and gratuitous assumptions of a contagion *modified, generated, debilitated, invigorated, annihilated, resuscitated, or suspended, by certain dispositions of the atmosphere ;* rather than admit the plain

and obvious fact, that the atmosphere itself, in concurrence with other palpable causes, constitutes the sum total of the true cause of these maladies.

Applying the same principles to the yellow fever of America, and to those of the Spanish Peninsula, we invariably find that these epidemics are incapable of being propagated beyond the sphere of the causes which are well known to produce them, however intimate may be the intercourse between the sick and the rest of the community. Proofs of these facts, as they regard epidemics in general, are recorded in my work upon Epidemic Diseases (vol. i. chap. xiii. p. 343 to 355); and with regard to the fever of Barcelona in 1821, they will be found in the Manifesto of the Fifteen Physicians.

In the epidemics of the Levant, it is quite common for persons ill of the disease, and having even pestilential sores upon them, to go from one town to another (there being, in that country, fortunately no sanitary laws), without the malady attacking any person in the towns which they enter. Russell relates, that in April 1759, the crew of a Turkish vessel, which was wrecked off the island of Cyprus, having the plague upon them, were in part saved, and some of them carried to Larnica. Other parts of the island were at that time labouring under an epidemic. Peasants and mule-drivers from those parts, with pestilential sores upon them, were daily to be seen in the streets and markets, and some of them died in the houses of Larnica. Two vessels also arrived, both of which landed sick passengers and sailors. Notwithstanding these various kinds of intercourse, none of the inhabitants of Larnica were known to have con-

tracted the plague *that year* ; *although they suffered severely from it the following year, in the months of February and March, when few or none of the infected recovered.* The daily funerals were from twenty-five to thirty ; and many of the inhabitants fled to the mountains. (Results, ch. xiii.) Such cases are quite common in the Levant.

Those persons who, in 1821, quitted Barcelona with symptoms of the fever already apparent, or who afterwards fell sick, the causes having been applied previous to their departure, were not known to communicate the disease to any one of the immense population of the numerous villages and villas which overspread the neighbouring hills and plains. If any of the residents of the country were affected, their illness was invariably to be traced to their having been in contact with the *air*, not with the *inhabitants*, of Barcelona or Barceloneta. *

It is an universally acknowledged fact, that when persons labouring under epidemics are placed in pure air, no disease is propagated. But it cannot be controverted that noxious air is capable of producing an epidemic, in the absence of all suspicion of pestilential contagion ; as by shutting down the hatches on ship-board, and keeping a number of men confined in a damp mephitic atmosphere ; whilst no instance can be produced of an epidemic disease being occasioned by a supposed pestilential contagion in the absence of a noxious atmosphere. If, then, epidemic diseases can be produced without contagion, con-

* See Notes to the Barcelona Manifesto.

tagion cannot be any part of their cause ; and if they cannot be produced without a noxious atmosphere, a noxious atmosphere must be their principal or efficient cause ; for I apprehend it cannot honestly be denied that the efficient cause of any effect is that without which the effect does not take place.

(Some illustrations from the Greek Pest Hospital, near the Seven Towers at Constantinople, are here omitted, which would be but a repetition of what has been already stated.)

Each of the facts detailed in the Non-contagion Manifesto from Barcelona, relating to the Hospital of the Seminario, the General Hospital, the Lazaretto de la Vi-reyna de Peru, and the Lazaretto of Nazareth, is, singly, more than a refutation of all that has been brought forward in favour of the alleged contagious properties of the fever of that city in 1821. In the first, the proportion of the attendants seized did not exceed one in thirty of the whole ; in the second, one in seven ; in the third, one in eight ; and in the last, out of about thirty, *not one* was seized. Thus, in the establishment for the sick in which the greatest number of attendants were affected, the proportion did not exceed that which was seized of the inhabitants at large, *i. e.* one in seven ; whilst in another the proportion was only one in thirty, and in a third the exemption was complete.

It is an acknowledged fact, indeed, that in hospitals which are well situated, and well kept, physicians, nurses, and other attendants on the sick, are proportionably even more exempt from epidemic diseases than individuals in general of those classes of society to which they respectively belong. From evidence laid before

the Committee of the British House of Commons, on this subject, in 1819, it appears, that in the fever institutions of London, Chester, Manchester, and Waterford, from their first establishment, as well as in the seven great hospitals of London, in which fever patients are mixed with others, the description of persons above enumerated, has, upon the whole, been affected with disease in a much smaller proportion than the community at large.

There also exist undoubted proofs, that even expurgators of goods in lazarettoes are less liable to be affected with epidemic diseases than the community at large. In the plague of Malta in 1813, it appears from the evidence of the physician who superintended the quarantine and lazaretto establishments at the time, and of other persons, that whilst the city of La Valetta and the villages around were suffering dreadfully, not a single expurgator of those goods which were supposed to be the importers of the contagion, was affected with the prevailing malady. ("Results," &c. vol. ii. pp. 21. 31. and 45.) In whatever manner these facts may be accounted for, they afford absolute demonstration of the non-existence of contagion, in the epidemics to which they respectively relate.

Numerous instances of a similar exemption from disease on the part of attendants on the sick are recorded; as in the history of various epidemics of Gibraltar; in that of the fever which occurred among the British troops that embarked at Corunna and landed in England, in 1809; and of other similar maladies ("Results" *passim*). *

* See also Section XXXIII.

SECTION VIII. (XVII.)

PROOFS OF THE NON-EXISTENCE OF PESTILENTIAL
CONTAGION DERIVED FROM THE LAWS OF EPIDEMIC
MALADIES.

“The laws of epidemic and those of contagious *general* diseases, with which alone they are liable to be confounded, are wholly incompatible.” P. 226.

DIFFERENT from those *general* maladies, which depend upon a specific contagion, and which alone can be confounded with them, epidemic diseases are capable of affecting the same person repeatedly, even in the same epidemic, and the same season ; or as often as their causes are applied in due force. With respect to the plague of the Levant, this is confirmed by Olivier, D’Ohsson, and other writers on Turkey ; and Dr. A. Russell has seen instances of the same persons being affected *three* several times in the same season. In the epidemic of Philadelphia, in 1797, Dr. Rush attended six persons (of whom he gives the names) who had previously undergone an attack of the disease. *Fifty-six* instances of second attack are enumerated by medical officers of the British Navy and Army at Gibraltar, in 1813, of which twenty-two happened in the same, and thirty-four in different seasons. In the plague of Moscow, in 1771, Mr. Samoilowitz experienced *three* several attacks of the disease in his own person. Further instances and proofs of this law are to be found in chap. vii. of my “Results.” The having had an epidemic once, twice, or thrice, is therefore

no guarantee against its recurrence ; although the pestilential contagionists, aware that they must otherwise abandon their doctrine, continue, especially in respect to yellow fever, pertinaciously to affirm the contrary.

In all countries epidemic diseases usually commence, decline, and cease, at certain determinate periods, corresponding with certain states of the seasons, and differing in different countries according to the latitudes of these countries respectively. In Egypt they usually commence in March or April, and cease in June ; whilst in more northern latitudes, as Turkey in Europe, and Spain, they begin in July or August, and cease in November or December, these periods being, however, occasionally accelerated or retarded, according to particular circumstances ("Results," chap. viii). In 1804, in ten out of twenty-three towns of Spain, the epidemic commenced in August, and in eight in September. This also was the period of the commencement of the fevers of Barcelona, Tortosa, and Palma, in 1821. On the other hand, we know of no contagion whose importation and activity are limited to any determinate period of the year.

It is, for the most part, at the precise period when the greatest numbers of persons are affected, and when the greatest mortality prevails, that epidemic diseases regularly but rapidly decline, and suddenly cease. For instances of this progress in the fevers of London, Marseilles, Cadiz, Malta, Gibraltar, and Malaga, see "Results," chap. xii. It has also been remarkable in the recent epidemics of Spain. Thus it was from the 19th of October, when the mortality and sickness were at their height, that the fever of Barcelona in 1821,

began sensibly to decrease. Its decline was regular and rapid, from 246 deaths on that day, to 98 deaths on the 2d of November : after which it still continued regularly and rapidly to decrease until it finally ceased. —If, on this occasion, the sanitary laws had any influence, it must have been of a noxious kind ; for the epidemic continued to increase considerably from the period at which the communication between Barcelona and Barceloneta was cut off, until that at which those diseases usually attain their greatest extension. In no place were restrictions so early resorted to, or so rigidly enforced, as at Tortosa ; they commenced even before the epidemic appeared ; and were so severe that they were complained of by the Military Governor, in a letter to the Political Chief of Catalonia. Yet no place suffered so much proportionably from the sickness of the season ; not even Barcelona itself*.

It is a remarkable and instructive coincidence, that in 16 out of 23 towns of the Spanish Peninsula, in which epidemics prevailed in 1804, the greatest mortality took place in the month of October ; and that in Cadiz, Gibraltar, and Alicant, it happened on the same day, viz. the 9th of October (“Results,” ch. viii.). In Barcelona, in 1821, the greatest mortality happened on the 19th of October. In several of the most remarkable epidemics, of which I have examined the history, the greatest mortality has invariably taken place in one of the autumnal months. But the faculty of attaining their highest degree of intensity, and of commencing and terminating their career, at certain determinate periods, has not hitherto been known to

* See Notes to the Barcelona Manifesto.

belong to any one contagious disease. In all these respects, the contagions with which we are acquainted have properties of a diametrically opposite nature.

Thus it appears that the laws of epidemic, and those of contagious *general* diseases, with which alone they are liable to be confounded, are wholly incompatible; that plague, typhus, yellow, scarlet, jail, ship, and hospital fevers, cholera, dysentery, &c. ; i. e. the diseases for the prevention of the spreading of which by contagion sanitary laws have been expressly founded, obey the laws of epidemics; and therefore cannot possibly depend in whole, or in part, upon a specific contagion, which is always the exclusive cause of its appropriate malady.

SECTION IX. (XVIII.)

PROOFS OF THE NON-EXISTENCE OF PESTILENTIAL CONTAGION, FOUNDED ON THE 'ARGUMENTUM AD ABSURDUM.'

"That were to make
Strange contradiction, which to God himself .
Impossible is held."

MILTON.

THE non-existence of pestilential contagion is an inevitable deduction from the facts, that in epidemic diseases, phænomena now take place, which if they were contagious could not happen; and that phænomena do not happen, which would, in that case, necessarily take place.

Instances of the former will be found in all the laws of epidemics already stated, [Section VIII. (XVII.) not

one of which could exist if these diseases depended upon a specific contagion.

An instance of the latter will be found in the non-extinction of communities by pestilence. No fact is better established, than that epidemic diseases are capable of affecting the same person repeatedly, even in the same epidemic and the same season, or as often as their causes are applied in due force. [Section VIII. (XVII.)] But it is self-evident, that diseases capable of affecting the same person repeatedly, if they were also contagious, would be incompatible with the existence of communities. The contagion would spread in a geometrical ratio, "diverging as it were from the centre to every point of the circumference of a city, a camp, an hospital, or a ship. Whilst it had subjects to operate upon, i.e. whilst a single individual of the community remained alive, it would never cease. Those who recovered would again and again be seized. No person who remained within the pale of society could escape. The malady would be communicated to the most distant nations. It would proceed in a continued circle, until the whole human race was extinguished." ("Results," vol. i. chap. vi. p. 215.) Turkey would, in the course of a single season, become a desert.

Thus a double absurdity results from the conclusion in favour of the existence of contagion in epidemic diseases. If small-pox were capable of affecting the same person repeatedly, what could put a stop to its progress short of the extinction of communities?

Having by every variety of proof, negative, positive, analogical, circumstantial, and *ad absurdum*, demonstrated the non-existence of pestilential contagion,

I shall not now, or at any other time, deem it necessary to enter into any refutation of such alleged facts, or gratuitous assumptions, as may be brought forward by its partisans in support of that doctrine. Its non-existence being proved, it can scarcely be necessary to show that it cannot be exported, imported, or propagated.

The pestilential contagionists, perceiving that they are likely to be compelled to abandon their doctrine, now shift their ground, and declare, that it is of no consequence whether epidemic diseases depend upon contagion or not, since they are, in either case, equally dangerous, and equally to be avoided or restrained. I grant that a disease cannot be more than mortal: and a mortal disease is, of course, equally dangerous, whether its cause be contagion, a noxious atmosphere, or any other agent of similar intensity. But it is of the utmost importance to know, which of these agents are to be avoided; whether, in order to escape disease and death, we are to avoid a person or a thing; as well as whether sanitary laws, founded on the doctrine of pestilential contagion, have any object; whether they are efficient or inefficient for their proposed end; and whether, or in what degree, they are, in other respects, useful or detrimental to communities.

PART II.

of the Exposition to the Cortes.

PERNICIOUS EFFECTS OF SANITARY LAWS.

“Now, truth, perform thine office ; waft aside
 The curtain drawn by prejudice and pride ;
 Reveal to wondering eyes
 This more than monster in his proper guise.”—COWPER.

IN the whole circle of human opinions, there is not perhaps another individual error to be found, so productive of complicated mischief to mankind, as that which teaches that epidemic and pestilential diseases depend upon a specific contagion. The injurious consequences of the belief in that doctrine comprehend the effects of legislative enactments, and municipal regulations, as well as of popular faith. But, as the two last are principally of importance, in as far as they are countenanced, strengthened, or upheld by the first ; and as their chief effects ultimately resolve themselves into the same physical and moral causes of sickness, misery, and mortality, I shall here consider them together, under the general head of “Pernicious Effects of Sanitary Laws.”

SECTION X. (XIX.)

MACHINERY OF SANITARY LAWS.

“With inward arms the dire machine they load.”—DRYDEN.

BEFORE stating the operation of these laws, it might be expected that I should describe them. But, to do this fully, were it not a repulsive and unnecessary task, would be altogether impossible within the limits to which I am here necessarily confined; since they embrace, as subjects or as objects, almost all parts of nature, whether animate or inanimate. As the “Project of an Organic Law of Public Health for the Spanish Monarchy,” in 207 pages, recently published by the Government Commission of Public Health, contains a collection of all the regulations on that subject, that have, since the invention of the doctrine of pestilential contagion, been promulgated in any country, I shall, from that work, endeavour to convey an outline or general idea of these wonderful regulations for restraining a non-entity; referring those who may be ambitious of obtaining a more intimate acquaintance with them, to the project itself.

It is divided into four parts. The first treats of the objects of the service of Public Health, and the authority to which it ought to be intrusted. Its express objects are, “to prevent the communication, to the Spanish dominions *in both hemispheres*, of the pestilence of the Levant, that of America, commonly called yellow fever, and all other pestilential or conta-

gious acute diseases, which may prevail in foreign countries." This task is proposed to be executed by means of a machinery, not very remarkable for its simplicity, of which a General Direction at Madrid, composed of nine members, under the immediate authority of the Government, is to form the centre or moving principle. Round these directors, or under them, it is proposed that there shall be Juntas of Health, provincial, municipal, and littoral, throughout the land. The two latter are to correspond with the Provincial Junta; the Provincial Junta with the General Direction; and the General Direction with the Government. Here employment at least is created. This correspondence would occupy no trifling portion of the time of all the clerks in the office of the Minister of the Interior. The General Direction is of course to have its president, secretary, treasurer, keeper of records, and other officers, to begin with; besides establishments, and suitable honours and rewards. This part comprehends fifty articles.

The Service of Health is divided into maritime and terrestrial. Part the second, which treats of the maritime Service of Health, is divided into five titles. The first (in thirty articles) conveys rules for exploring every acute foreign contagion at its source; and treats of bills of health, and of infected or suspected places. The second indicates the means of observing and pursuing foreign contagion on the passage of the vessels, persons, or goods, in which it may be transported. It gives directions respecting the manner in which ships' log-books are to be kept; and explains how clean bills of health may become touched, and touched bills suspected; and how clean, touched, and

suspected bills may become foul. The third contains "dispositions and means for *attacking* and *destroying* every pestilential or dangerous contagion (however invisible) which may be conveyed by vessels, persons, or goods, upon their arrival in the ports of Spain." The principal of these means are a lazaretto of the first order at Mahon, five of the second order at Cadiz, Barcelona, Ferrol, Carthage, and Passages, and a lazaretto of the third order at *every other commercial sea-port town* of Spain! This title contains 114 articles.

Title 4 contains "precautions of sanitary police to be taken by vessels loading and unloading in the ports of Spain, and during the voyage." It consists of twenty-eight articles, which, amongst other matters equally important, supply directions for preventing the embarkation of rats, cock-roaches, and *other insects*, and for destroying them. It also carves out employment for the Faculty, by directing that every vessel, having a crew of sixteen persons, shall carry a pupil in medicine and surgery, who has attended an hospital *for at least one year*; and every vessel, having a crew of thirty, a physician or surgeon of *approved Latin*!

Title 5 describes the penalties to be inflicted on the infractors of the Sanitary Maritime Service, in 38 articles. Fine; dismissal from employment; three years' hard labour; death!

Part 3, which treats of the sanitary land service, is divided into eight titles. The first, in 50 articles, contains "Rules for ascertaining the appearance or existence of any pestilential malady." Here we have an enumeration of symptoms. Title 2 contains "Mea-

asures for isolating, restraining, and extinguishing pestilential contagion, amongst contagioned communities, and for preventing its propagation to those which are healthy. It treats, in 72 articles, of the mode of isolating and *curing* the sick, and of preserving the healthy; of burying the dead; expurgating furniture and effects, and purifying houses; of dispositions relating to persons, aliments, medicine, and police; of the means of preventing the propagation of contagion; of the establishment, government, and operations of lazarettoes, of observation, of cure, and of expurgation; of the rules which ought to be observed in respect to the cordons of these and of contagioned communities, and of the expurgation and purification of those communities. Thus it will afford sufficient employment for the healthy part of the people of Spain to guard themselves against a chimera.

Title 3, "Of lazarettoes of observation, of cure, and of expurgation," containing 47 articles, concludes by talking of *extinguishing the cruel scourge of pestilential and contagious maladies!*

Title 4 contains "Rules to be observed in the establishment and vigilance of military cordons, in a contagioned population." *Three lines of cordons!* 42 articles.

Title 5, "Of the expurgation and purification of contagioned communities." The means—air, fire, gazes, water, and other fluids, in 63 articles.

Title 6, "Precautions for keeping communities in health, free from the contagion of the empested." Precautions ten thousand times worse than any real contagion that ever existed, in 53 articles.

Title 7 treats of charges, in 32 articles.

Title 8 describes the penalties to be inflicted on the violators of the sanitary land service, in 37 articles. Fines, dismissal from employment, imprisonment, death!

Part 4 treats of the public health, or “rules and precautions of sanitary police, in all the communities of the Spanish monarchy.”—Title 1. Its Objects and first Care. The projectors here manifest a disposition to extend their care to matrimony, and to the regulation of other public institutions: this head is again divided into Urban and Rural Sanitary Police.—Title 2, in 47 articles, amongst other things takes cognizance of manufactories.—Title 3, in 12 articles, takes cognizance of canals, roads, trees, vegetables, animals, and generally all subjects of rural economy.

Title 4, in 17 articles, treats “of the means of averting *endemic* and *epidemic* infirmities, and of preventing the propagation of *regular* and *hereditary* contagions.” Here I may observe that “endemic” is one of those words without a meaning, so frequently employed in medical writings. There can be no disease which is exclusively a native of, or confined to, any country. In adverting to “regular contagions,” it would appear as if the Commission designed to take the frail sisterhood under their protection; and as to “*hereditary* contagions,” I am somewhat at a loss to know where they are to be found.

Title 5, in 36 articles, lays down “politico-medical rules for the exercise of the art of curing.” Nothing is too great, nothing too minute for the grasp of the Commission: here they usurp authority over every department of medicine.

We now come to the animal creation; Title 6, in

31 articles, contains "Precautions for preventing communication, propagation, and reproduction of the epizootys or epidemics of animals:" they too, it seems, are contagious! and rules similar in principle are, of course, to be applied to them, as in the case of the human species.

Title 7, in 5 articles, treats of the "authority of Municipalities over the Health Communities, and of the jurisdiction of the Municipal and Provincial Juntas, and of the General Direction of the public health of the kingdom." Every thing centres in the General Direction, under the authority of Government: the nine gentlemen composing that tribunal, would, in effect, have an unlimited jurisdiction, an arbitrary power over the lives and properties of the people: a more appropriate instrument of systematic despotism than these sanitary laws would afford, has never yet been witnessed on the face of the earth,—over animals, vegetables, and minerals; over manufactures, commerce, and navigation; over the lives, liberties, and properties of the nation, the Juntas of Sanidad, the General Direction, and the Minister of the Interior, would possess an unlimited, an undefined, and a capricious authority; they would possess the right to kill, burn and destroy *on suspicion: precautionary measures against a chimera would thus supersede not only the constitutional laws of the state, but even the first law of our nature!*

I cannot but figure to myself the surprise which Hippocrates would experience, if he could rise from the grave, in contemplating a machinery of this description, got up for the purpose of *extinguishing atmospheric diseases!* Would he not be apt to think

that persons, who could institute or countenance measures so completely destitute of reason and common sense, must be much fitter for patients than for physicians ?

SECTION XI. (XX.)

SANITARY LAWS ARE UNJUSTIFIABLE UPON PRINCIPLE.

“ Not only crowds but Sanhedrims may be
Infected with this public lunacy.”—DRYDEN.

WERE pestilential contagion proved unquestionably to exist, sanitary laws would notwithstanding be unjustifiable. They would be still a grievous, barbarous, cowardly and selfish code,—a great, positive, and certain evil,—which legislatures and governments can have no right to inflict on certain portions of mankind already suffering, in order to afford to other portions the presumed means of escaping a sickness not necessarily fatal. It is most certain, that if persons labouring under small-pox, measles, or any other known contagious disorder, were doomed, in consequence of sanitary police regulations, to remain exposed to a noxious atmosphere, such as the pestilential contagionists allege is indispensable to the activity of *their virus*, the deaths of almost all of them would be ensured. No fevers, whether produced by a specific contagion, or the causes of epidemics, are at their commencement necessarily mortal; if not improperly treated or interfered with, the danger is not even great; but apply noxious air, and terror, and very few will

escape. Nor would this wholesale murder be the less unjustifiable, that the cause of the disease might be contagion: in small-pox, for instance, would it be justifiable, by the application of terror and foul air, to expose some children to certain death, in order that other children might have a chance of escaping? No reasonable man will make such an assertion. And, would a proceeding of this kind be less cruel, immoral, or unprincipled, in respect to patients labouring under epidemic diseases, were these diseases admitted or proved to be actually contagious? Whether a disease be contagious or not contagious, to compel the sick to remain exposed to a noxious atmosphere, is equally to ensure the death of by far the greatest proportion of those so exposed: it is wholesale official murder; and to effect it by the forms of law, does not diminish the moral turpitude of the act.

Considering the nature of sanitary laws, it might be supposed, that in all the epidemic diseases, erroneously reputed contagious, against which they had been intended to guard mankind, it had been discovered that there exists from their commencement some property decidedly fatal; certainly nothing less than such a discovery could justify these laws. Of how much deeper turpitude, then, will they appear, when it is shown that the extraordinary mortality of the diseases which it is their professed object to avert, has absolutely no other source than themselves!

Thus, whether epidemic diseases be deemed to depend upon contagion or other causes, sanitary laws are unprincipled, because their operation is directly, powerfully, and unequivocally injurious, or rather destructive to mankind. They are immoral, because

they beget cruelty, selfishness, cowardice, and a desertion of relations and friends ; and finally, they are unjustifiable, because they have no quality or qualities capable of counterbalancing in any degree the enormous mischiefs which they occasion to society.*

* A few of the horrid cruelties which people have thought themselves authorized to perpetrate, under the provisions of the sanitary laws, have been detailed in my "Results." I will here add one trait from the events of the fever of Barcelona in 1821, or rather of Tortosa. When the fever had become so severe in that town that persons could not be found to bury the dead, a reward was offered by advertisement to such as would undertake that employment ; with the promise, if they should survive, of a pension for life, or, if they should perish, of a provision for their families. Eight or ten inhabitants of Reus embarked in the perilous undertaking ; they all perished except two. The survivors returned to Reus, entering the town secretly in the evening ; the following day being a festival, they had the imprudence to show themselves, and were of course immediately apprehended : they were closely imprisoned, and it was discussed whether they should be immediately shot. The sanitary laws during that season having been the subject of much popular indignation, ridicule and scorn, this punishment for the infraction of them was deemed to be of too bold and violent a nature to be with safety openly ventured upon ; but the poor prisoners were privately counselled to make their escape ; and it was contrived that, in the act of escaping they should be shot by the guard. This version of the horrid transaction was current, and did not seem to be doubted by any one with whom I conversed respecting it at Barcelona. In such a matter, although it is difficult for a stranger to get at the precise truth, he may safely conclude, that the silence of the natives, or its non-denial, is strong evidence of the affirmative : even Mr. Montagut, who is a native of Reus, although I failed in getting an authentic narrative of the transaction through his means, did not venture to deny that a barbarous murder of this description had been committed under the colour of the law.

SECTION XII. (XXI.)

SANITARY LAWS ARE, IN FACT, INEFFICIENT FOR
THEIR PROPOSED ENDS.

“ But these are false, or little else but dreams,
Conjectures, fancies, built on nothing firm.”—MILTON.

WERE sanitary laws efficient for their proposed ends, we should have, in every epidemic, palpable proof of the fact. The moment the regulations enjoined by these laws were fully enforced, the sickness would necessarily cease: but the reverse of all this we find to be the case. There is not upon record a single instance of sanitary regulations having, even in appearance, proved efficient for their proposed ends. Epidemics from ordinary causes have generally run their regular course, observing their usual laws the same as if no restrictions had been imposed; with this material difference however, that restrictions have invariably contributed greatly to augment the sickness and mortality: it is unnecessary for me to do more than to show, that sanitary laws never stop the course of the disease. Whenever an epidemic commences, and the people are not removed from its site, it invariably pursues the ordinary course of these maladies, notwithstanding the intervention of sanitary restrictions. To this rule there have been no exceptions that I am aware of, from the earliest application of sanitary laws to the present time. But notwithstanding these striking facts, in a situation liable to epidemics, and having sanitary laws, whenever an epidemic appears at the usual season, under the application

of its proper causes, we are told by the pestilential contagionists, that it is because the sanitary laws have been infringed. No doubt sanitary laws must always suffer violation, because they are incapable of being duly enforced or observed; but if the disease was attributable to their violation, it would never disappear, because that violation is incessant. During the fever of Barcelona, in 1821, ingress and egress were matters of common traffic, insomuch that half a *piceta* being the common price of infraction, under ordinary circumstances, the Cordon was called in derision the *half-piceta* Cordon. Their evasion, by the people, being incessant, the sanitary restrictions, in respect to their professed object, are and must be nugatory: their non-observance, indeed, does no public injury; on the contrary, the restrictions being themselves injurious, to evade them is of benefit at least to the persons offending, and no injury to any one. In what a situation are we placed by the enactment of laws which the first law of nature, the duty of self-preservation, enjoins us to transgress!

On the other hand, when no epidemic diseases arise, their proper causes not being applied in places where plague police establishments exist, as at Gibraltar, whilst they prevail in some neighbouring places, as Cadiz or Tangiers, we are gravely assured by the pestilential contagionists, that this exemption is owing to the strict observance of those very regulations which they cannot but know it is impossible to enforce. Thus, whilst, in the absence of epidemics at Gibraltar, the commanding officer of that garrison gets credit for preventing their recurrence, by the strictness with which he enforces the observance of

quarantine ; whenever an epidemic does occur in that fortress (its proper causes being applied) the credit of it is with equal reason given to contagion, suspected to be introduced by some unfortunate smuggler, assumed to have violated the sanitary laws, or in consequence of these laws being remissly executed ; even although the disease should go through its usual course, and terminate at the usual time, and in the usual manner, as it necessarily must do, unless the inhabitants be in the *interim* removed to what is called the neutral ground.

So great is the delusion in this respect, that when an epidemic of any considerable magnitude, as that of Barcelona in 1821, takes place in one country, and a neighbouring country, as France, which is not so liable to it, and in which the causes are not applied, remains exempt, this exemption is in the same manner attributed to precautions which are incessantly violated, and which, if their observance could be strictly enforced, would be of no avail. The Cordons on the frontiers of France were not more respected than those by which Barcelona, Tortosa, and Palma were surrounded ; they could not, then, be the cause of the non-extension of the malady to that country. How, indeed, could a disease have the faculty of extending its ramifications to another country, which never could reach the nearest villages within the Cordons, or even the upper walls of the empested city ?

SECTION XIII. (XXII.)

SANITARY LAWS ARE A SOURCE OF GRATUITOUS EXPENSE AND VEXATION TO AN ENORMOUS AMOUNT.

“ Who therefore seeks in these
True wisdom finds her not, or by delusion.” MILTON

It is curious to behold an extensive, a cumbrous, a complicated, and a costly set of regulations erected into a system and applied to the affairs of life, without any previous inquiry into the existence of the evil which they were intended to remedy; and this system continued upon trust for centuries.

That evil being shown to be imaginary, it follows that the expenditure and vexation which attend the administration of these laws, are wholly gratuitous. The great extent of this expenditure and vexation is matter of notoriety. In the absence of all certain information founded on official documents, I have made a computation merely conjectural, for which, of course, I do not claim confidence. Whatever may be the degree of approximation to correctness of my hypothetical conclusions, the principle cannot vary, that the whole of the expenditure and vexation, incidental to these laws, is unnecessary.

	Rs. Vn.
Ordinary expenses attending the administration of sanitary laws throughout Spain . .	50,000,000
Extraordinary expenses incurred by individuals in removing themselves and families during the existence of an epidemic, <i>communibus annis</i>	250,000,000
Loss on the trade and commerce of the empested cities, and all other parts of the Peninsula, or places connected with them in foreign nations during the existence of epidemics, on an average of years	300,000,000
Expenses occasioned to navigation by the detention of ships, wages of crews, damage of cargoes, tear and wear of hulls and rigging, and other incidental expenses, in performing quarantine, on an average of years, throughout Spain	150,000,000
Expenses of troops for the service of the Cordons, of maintaining, transporting, and lodging the poor, and other incidental expenses, not included in the preceding items	100,000,000
	<hr/>
	Rs. Vn. 850,000,000

Thus, by supposition, 850 millions of reals, or 8½ millions of pounds sterling, are annually expended in providing means for obviating an imaginary evil; and if it were but one-fourth, or even one-eighth, of the sum supposed, it could not but be extremely desirable, that, instead of being uselessly or perniciously wasted, the amount should be applied to the necessary exigencies of the State. My endeavours to procure accurate returns proved wholly unsuccessful; such documents might perhaps have been obtained by the Cortes, by addressing their orders to the different cities and provinces of Spain. But even from such a measure we could scarcely be warranted, from the manner

of conducting public business in that country, to expect success; and there may be reasons why conjectural computations might be nearer the truth than official returns.

SECTION XIV. (XXIII.)

SANITARY LAWS ARE IN THEMSELVES A POWERFUL
CAUSE OF SICKNESS, MISERY, AND MORTALITY.

“Hie thee from this slaughter-house,
Lest thou increase the number of the dead.”

SHAKESPEARE.

THE dread of an imaginary is far more destructive than the dread or even the actual operation of a real contagion. The principle must be obvious, by which it happens that the dread of an unknown, mysterious, imaginary, and incomprehensible agency, from which we every moment apprehend destruction, is necessarily more fatal in its effects, than that of either a real and known contagion, as that of small-pox, or of any other deleterious object cognisable to the senses, as a pestilential atmosphere. This is even acknowledged by the pestilential contagionists. *Rivinus* relates, that during the plague of Leipsic, in 1680, fear wrought greater mischief than the true contagion itself; “*he did not know a single instance of sickness occurring from the plague, which did not originate in terror.*” *Constance* and *Tomasino*, who attended the hospitals during the pestilence which almost depopulated Rome in 1655, declared, that “*all who were timid were carried off by the distemper.*” But, if such be the effects

of terror inspired by popular faith only, what must be expected to be its effects when that popular faith is sanctioned, invigorated, and excited by municipal regulations and legislative enactments? The intensity of terror must be thereby augmented in a dreadful ratio; and it only requires the addition of the surrounding scenes of sickness, misery, and death, when an epidemic arrives at its highest degree of severity, to complete the picture of human calamity and wretchedness. The application of such a combination of moral causes of destruction it can be the lot of very few to survive.

The terror occasioned by the application of sanitary laws, superadded to a lesser degree of the proper causes of epidemics, than would otherwise be sufficient to produce disease, will occasion sickness, misery, and death.

There are also a variety of ways, besides its direct operation on the mind of the sufferer, in which the terror incidental to the operation of sanitary laws, combined with that which is the result of popular faith, produces, or concurs to produce, those various injurious consequences.

Persons who find themselves attacked by any epidemic disease reputed contagious, knowing that upon their disease being declared, they will be most probably abandoned by all the world, conceal their sickness as long as they are able; i.e. until, if even an efficient treatment were at hand, they are past recovery. This renders the application of an efficient method of cure impracticable.

The same cause occasions the desertion of the sick by friends, relations and attendants, and often ensures death from accident or want.

By the operation of the same principle, famine may be occasioned on a large scale, as happened in Marsilles in 1720 ; or the means of procuring subsistence be cut off by the impossibility of getting employment, as happens in almost all epidemics reputed contagious in large, and especially in manufacturing towns, although there may be no deficiency of the necessaries of life, or even if they should be abundant.

The sick are also deprived of medical aid, or medical aid rendered useless, by the restraints imposed upon, or the apprehensions of, medical men.

By being compelled, in pursuance of the same base and selfish laws, to remain exposed to the noxious atmosphere of the place, in which the disease originated, and to the other physical causes, the sick are doomed to almost certain death.

It must be unnecessary to dwell on the shooting of *suspected* persons, for consulting the first law of nature by violating cordons ; on the refusal to receive ships, or ordering them away when in distress, or in sinking or burning them when suspected of having a *suspicious* sickness on board ! These, and many other traits, of which I could readily recite numerous instances even of very recent occurrence, are so very cruel, barbarous, shocking, and unprincipled, that I must decline to dwell upon them. At the very recollection of such horrors, who can refrain from blushing at the depraved selfishness of our species ?

SECTION XV. (XXIV.)

SANITARY LAWS ARE INJURIOUS TO SCIENCE, COMMERCE, NAVIGATION, AND MANY OTHERS OF THE BEST INTERESTS OF COMMUNITIES.

“ Speak, what Phœbus has inspired thy soul
For common good, and speak without control.”—DRYDEN.

SANITARY laws have operated as a permanent and insurmountable obstacle to an efficient investigation into the causes and cure of epidemic maladies. They have been an insuperable bar to experiment and observation, as well as to the application of known remedies. They have served, not simply to prolong ignorance, but to produce an accumulation of false knowledge in medicine ; and, upon the whole, to occasion, in respect to epidemic diseases, a great and important retrogradation.

Of these consequences of sanitary laws, it can hardly be necessary to adduce proofs, or to describe in what manner they arise from them. The very existence of this controversy affords sufficient evidence of the truth of these conclusions.

Neither can it be necessary to do more than merely to state their effects upon commerce and navigation. When the intercourse of individuals between places infected and not infected, is interdicted, it cannot be questioned that a total stagnation of commerce must take place during the prevalence of an epide-

mic, not only in the places infected, but in all the neighbouring districts ; producing a certain effect even in distant nations. What the towns of Barcelona, Tortosa, and Palma, &c., suffered from the total annihilation of their commerce for the five last months of the year 1821 ; what the commerce of Catalonia generally, and even that of neighbouring provinces, as well as of the individuals connected with these places, in distant parts of Spain, and in foreign nations, must have suffered, during the same unfortunate period, although inascertainable, must be deemed to be of enormous amount.

The great loss incurred by navigation, owing to the same cause, it is also extremely difficult, although perhaps not impossible, to appreciate : some *data* might be afforded by returns from the quarantine stations.

The inconvenience, expense, and sometimes ruin, which these laws bring upon travellers, upon fleets, and upon armies, although their amount cannot be subjected even to probable conjecture, are, however, too palpable to require particular elucidation.

Thus there are perhaps no distinct interests in society, excepting those of some medical Juntas, and of all superintendants of quarantine, lazarettoes, and others employed in that particular service, to which sanitary laws are not productive of injury ; but to none so much as to those whom they are professedly intended to benefit—the poor and the predisposed.

SECTION XVI. (XXV.)

SANITARY LAWS ARE, IN THEIR NATURE, NECESSARILY ARBITRARY, CAPRICIOUS, AND DESPOTIC.

“Proves that they ne’er believed the fears they press’d,
But barbarously destroyed a nation’s rest.”—DRYDEN.

THE sanitary code is necessarily arbitrary, capricious, and despotic, supplying Governments, Corporations, and Juntas with extensive means of influence, coercion and mischief. As all men love power, and as the individuals, who compose the constituted authorities of States, cannot be presumed to be exempted from this common law of our nature, it follows that they must necessarily feel a partiality for such establishments as contribute to gratify their desires. Hence, without any reference to their intrinsic merits, sanitary laws have always obtained a large portion of official favour. The truth of this conclusion, which results as a consequence from the nature of man, is also demonstrated by the evidence of particular facts. These observations are applicable in their degree to all Governments. Their partiality, in point of fact, to the institutions in question, is evinced by the readiness which they have always shown to adopt them, without the previous institution of any very strict inquiry into their fitness for their proposed ends; by the reluctance which they have manifested to examine that fitness when it has been called in question; and by the marked difference of treatment which has been invariably experienced by the medical supporters, and the medical opponents of the abolition of sanitary institutions.

That Governments, Corporations, and Juntas should have no reluctance to employ, for their particular purposes, engines thus placed by public credulity in their hands, is only to say, that Governments, Corporations, and Juntas are composed of individual human beings. For confirmation and illustration of these principles, let us examine the motives and the results of the labours of the Medical Commissions which have from time to time been sent from France ; nominally to investigate the fevers of Spain, but in reality to create pretexts for the extension of sanitary establishments, by securing pestilential contagion on its tottering throne. Such have been the ill-concealed objects of the labours of Berthé and Pariset. Does there exist a man so silly as to believe that the Commissions in question had any other than objects strictly political ? The inhabitants of Cadiz and of Barcelona, indeed, whilst smarting under the calamities of pestilence, and ignorant alike of the causes and of the remedy of the evil, might have for a moment treated those foreign missionaries, as persons endowed, if not with divine, at least with oracular attributes, come to rescue them from destruction. But, at Barcelona at least, the public were soon undeceived. The presence and the doctrines of the Commissioners served but to augment the terror and the mortality : and this increase of public calamity they contrived, with some finesse, to render subservient to the real objects of their mission. The additional mortality they represented as an additional proof of the existence of pestilential contagion ; as if no disease could be mortal that was not produced by that cause ; or as if every disease which is produced by that cause must be inevitably mortal.

The Commissioners to Barcelona did not wait to undergo the drudgery of a too tedious investigation before they decided. But if they had not been well assured of the manner in which it was most agreeable to their principals that they should decide, would they not have taken greater pains to investigate facts, previous to forming their conclusions? Whoever can believe that the French Government, or their medical Commissioners, could have seriously entertained those terrible apprehensions of an imaginary contagion in the interior of Spain, which they so solemnly professed to feel, must also think them very unfit for the discharge of their respective functions. But it must be obvious to the meanest capacity, that the establishment of sanitary institutions along the borders of Spain, as well as of other countries, would be extremely useful to the French authorities, by putting into their hands a permanent instrument of arbitrary rule over their own subjects, and the means of occasionally interdicting intercourse with foreign nations and with foreign principles, as well as of stationing an army, great or small, at convenient times and places, on the frontiers or elsewhere, and of removing them at their pleasure, or employing them according to their varying ideas of political expediency. It is also clear that these objects could not be so decently effected without a due quantity of terror feigned. If it were a favourite object with the French Government to overturn the Constitutional system of Spain, and if they were certain of being able to effect it by marching the army of the Cordon against Barcelona, would they hesitate to do so because an epidemic might prevail in that city? No! they would even order the

assault to be given, if it otherwise suited their purposes, on the day of the greatest mortality ; so completely is the bugbear of pestilential contagion an engine of State policy.

When we bring to mind the fact that, whilst there died but one of five of the French Commission, there perished nineteen native physicians and surgeons, being at the rate of one in three, or one in four of all the physicians and surgeons of Barcelona and Barceloneta, we shall find the clue to the real motive of the ridiculous and hyperbolical honours and applauses, which, according to the Parisian journals of March 9th 1822, were lavished on the contagionist members of its Commission by the French Government, and by the Reporter in the Chamber of Deputies, M. Etienne. It was not Dr. Pariset, his colleagues, and *les Sœurs de la charité*, that were to be eulogized and rewarded, but pestilential contagion and sanitary laws, that were to be maintained and extended. Thus it is clear that arbitrary Governments, or Governments wishing to be arbitrary, feel a strong interest in upholding this chimerical and senseless doctrine. It is one of those wretched props to which, in an enlightened age, despotism naturally clings, as to a sort of forlorn hope, in order to counteract or to retard the progress of knowledge and of freedom. Nor is it any argument against this proposition, that sanitary institutions have been introduced into free countries, as Britain, America, and Holland ; since free countries, either in pure imitation, or without a due consideration of the consequences, have frequently been known to import pernicious commodities from their enslaved neighbours.

SECTION XVII. (XXVI.)

SANITARY LAWS OUGHT TO BE FORTHWITH ABOLISHED: THEY ADMIT OF NO MODIFICATION OR DELAY.

“ Our doubts are traitors,
And make us lose the good we oft might win,
By fearing to attempt.”—SHAKESPEARE.

THE calamities which annually afflict the Spanish Peninsula, from epidemic diseases, such as have just been experienced by the cities of Barcelona, Tortosa, Palma, &c., and of which by far the greatest proportion may be fairly attributed to the operation of sanitary laws, constitute an irresistible motive for a prompt and efficient inquiry into the nature and operation of these enactments. The general result of such an inquiry, properly conducted, would be, that, did no other obstacles exist to the progress of improvement in Spain, these laws would alone be sufficient, for a long time, to prevent her attaining that high degree of prosperity which she is otherwise so eminently fitted to acquire. In the name of health, they cause health, life, liberty, and revenue to be destroyed; knowledge to be impeded; and commerce and navigation to be paralysed; not to speak of their detrimental effects upon numerous other interests.

Notwithstanding the irrefragable proofs which have been given, that pestilential contagion cannot possibly exist; that sanitary laws, which were solely

grounded upon the contrary belief, cannot therefore have any just object ; that they, in fact, far from fulfilling their proposed end, of preventing the spreading of epidemic maladies, greatly augment sickness and mortality, and are otherwise productive of mischief without end : notwithstanding all these circumstances, I say there are still persons, as we see from the project of the sanitary laws just printed by the Central Commission of Government at Madrid, who are for extending their regulations, as if their inefficiency and injurious operation had not been fully demonstrated ; whilst others, who do not dispute their mischievous effects, profess to entertain apprehensions of dangerous consequences from their abolition, and talk of only mitigating their severity, or modifying their enactments, as if they considered it a hardship to be freed at once from any great evil to which they had been for some time accustomed. The ground of these apprehensions I am unable to comprehend ; with as much propriety might we talk of mitigating robbery, or modifying murder.

But contagion being abandoned, compulsory emigration, with a view to avoid noxious air, would be no less unjustifiable. I cannot admit the propriety of sanitary laws, under any circumstances, or under any species of modification. To dictate what kind of air men should breathe, appears to me to be as contrary to every principle of just government, as to dictate what kind of fluids they should drink, or what kind of food they should eat.

If it should be alleged, that, in the event of the abolition of all sanitary laws, there would be danger of a popular reaction, I answer, that I do not believe

it ; and that, when such an evil arises, it will be time enough to apply the remedy. What ! are laws notoriously bad, notoriously destructive, to be continued, only in order to humour popular caprices, supposing such caprices to exist ? But they do not exist ; or at least their existence is partial and uncertain. The fact is, that to attribute to the ignorance of the people obstacles which arise only from ignorance or design on their own parts, is here meanly resorted to, as a subterfuge, by those of the medical faculty who are advocates of pestilential contagion. Whatever be the motives of this opposition to the progress of knowledge, and the establishment of beneficial measures, is immaterial. If it arise from ignorance, it was a culpable negligence not to have taken due pains to become acquainted with what has been done and written on the subject of epidemic diseases ; if from design, to sacrifice knowingly, and in the face of demonstration, truth and science on the altar of policy, or of personal interests, denotes a criminality of still higher degree.

The only regulations or restrictions which, in a free country, would be at all consistent with principle, are such as come properly within the jurisdiction of the municipalities, or local authorities of cities, towns, and villages. On the occurrence of yellow fever in the United States of America, for instance, the local authorities direct the temporary removal of the inhabitants of such districts as are materially affected with disease, either to the adjacent country, or to any part of the same town which remains free from the cause of sickness. As soon as that cause has passed away with the change of the season, they are again permit-

ted to return. How far even this degree of compulsion may be justifiable, in a matter which only regards the individuals who are the subjects of it, and who could not affect others with disease, is a question into the merits of which I am not at present called on to inquire. But it is very certain that no further degree of compulsion would be justifiable, in such a case, were contagion the admitted cause of epidemic diseases.

In condemning indiscriminately, and without exception, all the regulations founded on the sanitary code, and consequently all the measures which were adopted at Barcelona, Tortosa, Palma, &c. during the epidemics of 1821, I wish it to be distinctly understood, that I am very far from meaning to imply censure on the Government, on the Supreme Junta of Sanidad, on the Superior Junta of Sanidad of Catalonia, or on the Municipality or Municipal Junta of Sanidad of Barcelona. On the contrary, I am well persuaded that all these bodies have done every thing, consistently with the received ideas on the subject, which they thought calculated to alleviate the public distress. I have indeed reason to know that they have been most anxious to perform this duty efficiently. It would be uncandid to deny that, under the prevalence of the doctrine of pestilential contagion, it would have been impossible for any of these bodies to have abstained from contributing their share towards imposing the restrictions which that doctrine so imperiously dictated. The delusion is common to Christendom. It was never till now brought for discussion before the national authorities of Spain. To that fatality, by which alone a doctrine in its

structure the most absurd, and in its consequences the most mischievous, could have been suffered, for ages, to pervade every Christian community, without any regular inquiry being instituted into its validity, together with the difficulty, in all cases, of extirpating errors which have, for a length of time, been taking root, is the present extent of the evil wholly to be attributed.

But science is not a matter of faith; and in the adoption of the improvements which experience daily reveals, it is the duty of legislative bodies and public administrators to anticipate the necessities and demands of communities. In reference to the important matters here under discussion, I feel assured, from the liberal spirit of investigation which is known to pervade that body, that the Cortes of Spain will anxiously embrace, from every quarter, such information as the increasing knowledge of the age is capable of affording; and that the results of the inquiry now pending, respecting the cause of epidemic diseases, will redound greatly to the advantage of the inhabitants of the Peninsula, and successively of other countries, in all future pestilences. How glorious will it be for Spain, to have been the first nation to set the example to the world of renouncing doctrines and abolishing institutions engendered, in the dark ages, on ambition, fear, and selfishness, and productive of incalculable mischiefs to mankind!

Amongst the absurd objections, which I have heard urged against the abolition of sanitary laws in Spain, is the danger that other nations would not trade with a country in which such measures were discontinued. Do other nations, then, refuse to trade with Turkey,

in which there are no sanitary laws? Nations will not be deterred by real, and far less by imaginary dangers, from trading wherever it is their interest to trade. Far from such a consequence being to be apprehended on the part of Spain, if the Cortes were to abolish sanitary laws to-morrow, other nations would be compelled, by the joint influence of so striking an example, and of the progress of knowledge, immediately to pursue a similar course. The spell would be dissolved. At any rate, it would be quite sufficient time to think of the means of obviating an evil, when there appeared any rational probability of its occurrence. And, in all cases, it must be an inadmissible principle of action, in an independent state, to execute, or to omit executing, any measure of internal regulation, merely because it might be agreeable or disagreeable to other countries. Admitting such a principle, Spain would have been bound not to have abolished her ancient government, and not to have established, or to abolish after having established, her representative system, according to the will or caprice of other nations. This chimerical danger I only notice, in order not to leave any probable objection unanticipated.

The abolition of sanitary laws does not admit of delay; since it has been shown, 1. that either in the case of the existence or non-existence of contagion, in epidemic diseases, these laws would be pernicious, selfish, cruel, immoral, barbarous, and unprincipled; 2. that they are, in point of fact, utterly inefficient for their proposed end, of arresting the progress of epidemic diseases; 3. that pestilential contagion, upon a belief in which these laws were originally

founded, has no existence ; 4. that their continuance, even for one season, would occasion a loss to Spain amounting probably to 100,000 lives, and 800 millions of reals ; 5. that, besides their direct destructive effects to health, life, and property, they are highly injurious to liberty, science, public prosperity, commerce, navigation, manufactures, and, with the solitary exception of that of the persons employed to administer them, to every distinct interest in society ; and, 6. that they are a powerful engine in the hands of Governments, Corporations, and Juntas, for the oppression, vexation, impoverishment, and subjugation of communities. All these points being fully established, further proof would be quite superfluous ; and delay, under the pretext of the necessity of additional experiments or researches, would be idle, pernicious, and even criminal.

SECTION XVIII. (XXVII.)

RECAPITULATION.

“ The flying rumours gathered as they rolled,
 Scarce any tale was sooner heard than told ;
 And all who told it added something new,
 And all who heard it made enlargements too ;
 In every ear it spread, on every tongue it grew.”—POPE.

IN recapitulating the contents of the preceding Exposition, I shall follow the course in which the several heads which it embraces ought to have been treated of, rather than that in which they have been actually

discussed. Taking my model of sanitary laws from the project of an improved code recently published by the Commission of the Spanish Government, Sect. X. (XIX.), I have shown them to be immoral, selfish, cowardly, cruel, barbarous, and unprincipled; and consequently, in every supposable case, unjustifiable, Sect. XI. (XX.); as well as, in point of fact, wholly inefficient for preventing the commencement, continuance, or increase of epidemic diseases, Sect. XII. (XXI.)

It has also been proved, that the supposed cause of epidemic diseases, which sanitary laws were intended to obviate, has no existence, 1. from the inherent absurdity of the doctrine of pestilential contagion, Sect. IV. (XIII.); 2. from its fraudulent origin, Sect. V. (XIV.); 3. from the total absence of proof, Sect. VI. (XV.); 4. from direct and positive proof of the contrary, Sect. VII. (XVI.); 5. from the difference, in respect to their causes, to their laws, and to their phænomena, between epidemic diseases and those maladies which are unquestionably produced by a specific contagion, Sect. II. (XI.), III. (XII.), and VIII. (XVII.); and, 6. from the absurd consequences which would follow from the admission of the existence of such a power, Sect. IX. (XVIII.)

The evil which they were professedly intended to obviate having no existence, sanitary laws are consequently a source of gratuitous expenditure and vexation to communities, Sect. XIII. (XXII.) They are actually the cause of by far the greatest proportion of all the sickness, misery, and mortality, incidental to pestilential diseases, Sect. XIV. (XXIII.) They

are injurious to science, commerce, navigation, and many others of the best interests of nations, Sect. XV. (XXIV.) They are, in their nature, necessarily arbitrary, capricious, and despotic, supplying Governments, Corporations, and Juntas with an appropriate machinery for the oppression, impoverishment, and subjugation of states, Sect. XVI. (XXV.) They admit of no modification, hesitation, or doubt, but ought to be forthwith abolished, Sect. XVII. (XXVI.)

(End of the Exposition to the Cortes.)

SECTION XXVIII.

CRITIQUE ON THE PROJECT OF THE SANITARY CODE, BEING THE AUTHOR'S FOURTH REPRESENTATION TO THE CORTES.—IS INVESTED WITH THE CROSS OF THE ORDER OF CHARLES III.—HIS EXPOSITION IS REFERRED TO THE DIRECTION DE ESTUDIOS.—HIS DEPARTURE FROM SPAIN.

“ Much was believed, but little understood.”—POPE.

THE preceding “Exposition” exhibits, I trust, a clear view of all that has been said, or perhaps can be said, on the subject of pestilential contagion and sanitary laws. I have endeavoured not to leave a single allegation unanswered, a single argument unrefuted, a single *datum* undisproved, of all that have ever been advanced by the partisans of that erroneous doctrine and pernicious system. Besides the usual number of 250 copies to the Cortes, so that each Deputy might have one for his particular use, I transmitted several copies of this publication to each of the foreign Ambassadors at the Court of Madrid, not overlooking even the Pope's Nuncio, although I certainly did not reckon upon producing conviction at the Vatican. These copies were accompanied by a circular letter to each diplomatic agent, requesting that he would have the goodness to transmit them, without delay, to the proper authorities of his country. The representatives of the United States, France, Austria, the Nether-

lands, Portugal, and Saxony, acknowledged the receipt of their respective copies in terms suited to the occasion, promising to transmit them without delay to their respective Governments. The Pope's Nuncio, the Russian Envoy, and some others, were silent. The publicity which the subject obtained by these means necessarily occasioned an increase of discussion and elucidation even among the members of the Cortes.

Circular.

“ Madrid, May 2d, 1822.

“ *To His Excellency* ———

“ Sir,

“ The subject being highly interesting to all nations, I have the honour, for the information of the Government and learned societies of your country, to transmit to Your Excellency copies of my ‘ Exposition, addressed to the Cortes of Spain, concerning Sanitary Laws, their Objects and Effects; in which it is again demonstrated that Contagion does not exist in Epidemic Diseases, and that Sanitary Laws are injurious to Communities;’ drawn up in pursuance of a mission, with which I have been intrusted by the Spanish Government, to examine the fever of Barcelona.

“ I have the honour, &c. &c.”

Answer of Count Brunetti, Envoy for Austria.

“ Madrid, le 24 Mai, 1822.

“ Monsieur,

“ A mon retour d'Aranjuez, j'ai reçu la lettre, que vous m'avez fait l'honneur de m'adresser le 2 du

mois courant, et les quatre exemplaires de l'Exposition que vous avez adressée aux Cortes, touchant les lois de Santé, et du Manifeste sur la fièvre qui a regnée à Barcelone dans les derniers mois de 1821.

“ Recevez, Monsieur, je vous prie, mes plus sinceres remerciemens pour m'avoir fait connaitre ces deux intéressans ouvrages, que je m'empresserai à faire parvenir à ma Cour, et agréez en ineme tems l'assurance de ma consideration la plus distinguée.

“ L. BRUNETTI.

“ *A Monsieur CHARLES MACLEAN,
Docteur en Medecine, à Madrid.*”

Thus, if all Governments did not directly benefit by the medical investigations in Spain, in consequence of the pestilence of Barcelona in 1821, the fault was not mine.

The appearance of the Exposition sealed the fate of the project of the Sanitary Code. It was deemed more than a sufficient answer to the attacks upon my Protest. Those who had previously insisted with vehemence that the discussion of the project should be accelerated, as being indispensable to the salvation of the State, were, on that point, silent as the grave. The object now seemed to be, as it was evident that the Code would not be passed unopposed, or even proposed without the danger of being rejected, to get decently quit of the subject for the present, without any discussion ; and for this the late period of the session afforded a plausible pretext. Neither party was desirous of provoking the contest. Although the contagionists were completely “paralysed, the conviction of the non-contagionists had not been sufficiently

decided, or sufficiently long established, to enable them to look, without some remnant of reverence, at an error lately so sacred in their eyes. When, therefore, Dr. Seoane, a member of the Committee of Public Health, moved, in the month of June, that the discussion of the project be postponed for that session, and that the Government be requested, in the mean time, to direct further experiments to be made, with a view to determine the validity of the doctrines in dispute, the proposition was unanimously adopted by the Cortes.

To this plan of making further experiments without having sufficiently examined the merits of those previously made, I have already stated various objections; and could, if it were necessary, state many more; but I am rather persuaded that this was only a convenient mode of getting quit of the subject, and that most probably we shall never hear any more of the matter of renewed experiments. I am not aware that in any department of science, proofs more irrefragable have ever been given of the truth of any proposition, than those which are contained in my work upon epidemic diseases, and in the abridged demonstration contained in the preceding Exposition, of the non-existence of pestilential contagion, and the injurious consequences of sanitary laws; and whilst they would inevitably occasion much delay and waste of time, what more than demonstration could any new experiments produce? Certain critics of my doctrines, I am aware, have considered or affected to consider the subject as insusceptible of demonstration; as if any matter of fact or science could be insusceptible of its appropriate proof. Penetrate or

remove the mountains of false knowledge, by which truth is here eclipsed or overlaid ; little else is necessary. The subject is not in its nature abstruse, but has been made so by adventitious circumstances. To direct new experiments to be made, whilst a mass of experiments upon the same subject, affirmed to be conclusive, are left unexamined or confided for examination to persons notoriously biassed, is both absurd and pernicious ; it may be compared to the conduct of a man who should determine to send, at a vast expense, to the East Indies or South America for gold, whilst he refuses to avail himself of the information, that by searching his coffers or his closets, he may, with very little trouble and at no expense, find at home as much treasure as is necessary for his purposes. Besides expense, and the calamities incidental to delay in such a case, according to the agents employed, would be the risk of failing to re-discover what has been already proved, and the prolonged operation of a pernicious delusion, and of all the consequent destructive measures of sanitary laws. From questions even of science it is not always practicable to exclude considerations of political expediency. We shall suppose a Government, an Administration, or a body of Physicians, or all three, interested, from regard to faith or convenience, in causing the new experiments proposed seemingly to fail : how easy would it be for them to accomplish such an object ! In a view of science, experiments made under the auspices of patronage, far from having a better, have not an equal chance of being well and impartially, because they cannot be so independently, conducted, as by individual volunteers, and because it is necessary

to their success, that their conductors should have, if not a superior knowledge of, at least a superior taste for, such investigations. Had I known this intention of proposing new experiments, supposing it to be seriously meant, I would, for these reasons, have strongly remonstrated against it, unless it appeared that those which had been already presented were found, upon a fair examination, to be insufficient. Against a measure so fraught with expense, delay, calamity and delusion ; a measure tending to divert the attention from a close examination of the inferences which had been already promulgated ; and whilst every thing has been done to create the belief that nothing has been accomplished, I should most solemnly have protested. If my experiments, facts, and inferences upon this subject be correct, nothing can be done by others but to imitate or repeat them : if they be not correct, let them be refuted ; they will not be found, like those of the partisans of the opposite doctrines, to depend solely for confirmation upon the credit of individual testimony. Besides particular experiments and researches, my *data* are drawn from the history of all ages and nations, and of all epidemics, and are capable of being verified by all mankind. Abundance of persons may now be found, who will undertake to perform the exploits of swallowing the excretions of yellow fever patients, rubbing the bubonic matter of plague, and other inconsequent or ridiculous experiments, showing, that whilst they have just sufficient discernment to be convinced, by what has been done and written, that no such thing exists as pestilential contagion, they are very far from being fit persons to conduct, upon scientific principles, the pro-

cesses here required, or to explain the laws of epidemic diseases.

In consequence of an intimation from Dr. Seoane, a member of the Committee of Public Health, that if I would write a critique on the project of that Committee, of which, although one of the framers, he had the candour to acknowledge the demerits, he would present it immediately to the Cortes; the following observations were written, translated, and presented, in a very short space of time; referred to the Committee on whose labours they were a commentary; and now probably lie buried in their archives.

Observations presented to the Spanish Cortes in June 1822, on the Project of a Sanitary Code prepared by their Committee of Public Health.

IN offering a fourth time to the Cortes some observations on the momentous subject of sanitary laws, I am not apprehensive that I shall be suspected of being actuated by any other motive than an ardent desire to contribute to the welfare of the Spanish Nation, so worthy of the admiration of mankind by her magnanimous struggles and sacrifices in the cause of virtue and of freedom, or of entertaining towards her illustrious Representatives, any other sentiments than those of the highest consideration and the most profound respect.

It may be received as some proof of the sincerity of these sentiments, that I have as a volunteer, at considerable inconvenience and expense, left my country, my family, and my affairs, and devoted seven months of my life to the elucidation of the fevers of the Peninsula: I have returned to Madrid to place

my views on the subject of pestilential contagion generally, and of sanitary laws in particular, before the National Congress, in the full confidence that, as an enlightened, unbiassed, and independent body, they would be ready, nobly dismissing prejudices of every kind, and even disregarding, in such a case, all personal considerations, impartially to investigate the important questions at issue, and to form their decisions solely according to the truth and justice of the case. Nothing but the most intimate conviction of the truth of my propositions on the one hand, and of the intelligence and justice of my judges on the other, could have induced me to embark in so arduous an undertaking. The result of the zealous co-operation of ten native and five foreign Physicians at Barcelona, was the complete refutation of the doctrine of pestilential contagion, as it regarded the fever of that city in 1821, in a Manifesto which will be remembered when sanitary laws shall cease to be more than a matter of history*. The difference between the present project and its immediate predecessors evinces the beneficial effects already produced by that document; and relying, as I do, upon the omnipotence of truth over unbiassed and enlightened minds, I expect no less than that, on the discussion of the project, the Cortes will find in the "Exposition," which I had the honour to present to them, sufficient grounds for its total abandonment.

Although some projects may be worse than others, the objections which I feel apply to *all* projects of

* For the names of these physicians, see the signatures to the Manifesto.

sanitary laws. I am well aware, from long experience, of the great difficulty of the subject, and can plainly perceive the sources of the embarrassments of the Committee in the adoption of a plan which they confess to be the result of necessity rather than conviction. "It was indispensable, they say, to take aside and to solve the knotty problem which now agitates diplomacy no less than medicine, viz. whether the yellow fever be contagious and importable, or not? The chiefs of both parties are highly respectable, and all of them allege facts which they think make in their favour: the Committee found themselves under the necessity of balancing the opposite scales, and of deciding; and, leaving polemical discourses to academics, they have taken the safest road for the good of communities: they conclude that the yellow fever is contagious, and that it is capable of being imported, and in that they follow the example of England, of France, and even of America, whose rulers, although there are among them strong proselytes of the opposite party have passed, salutary laws founded on the affirmative." *

* "Erale indispensable tomar un partido, y resolver el ruidoso problema que hoy agita la diplomacia, quiza no ménos que la medicina: á saber, si la fiebre amarilla es ó no contagioso é importable: Los coriféos de ambos partidos son muy respetables; todos alegan hechos, que creen terminantes a su favor. La Comision se vió en el apuro de tener que pesarlos, y decidirse: y dejando para las academias los discursos polémicos, ha tomado el camino mas seguro para el bien de los pueblos. Sienta que la fiebre amarilla induce contagio, y que es capaz de importacion: y en esto sigue el ejemblo de la Inglaterra, de la Francia, y de la misma América, que teniendo esforzados proselitos del partido opuesto, no obstante dictan sus gobernantes saludables leyes apoyados en la afirmativa."

In order to place this matter on its proper footing, it is necessary to observe that, for some time, the doctrine of contagion in epidemic diseases has wholly ceased to be a question of medicine, of fact, or even of faith, and has become entirely a matter of policy, and of diplomacy. The proofs which I have at various times adduced, of the non-existence of pestilential contagion, and of the pernicious effects of sanitary laws, (collected as into a focus in my Exposition to the Cortes,) have amounted to a demonstration as complete as any of which a question of fact is susceptible. But these errors being subservient to the views of despotic Governments, or of Governments wishing to be despotic, my demonstrations have been, and will be, as long as possible, resisted by such Governments. To them a code of sanitary laws is an engine of despotism and delusion, both for internal and external purposes, of a most appropriate and destructive kind. Under these points of view, this subject is even more important to mankind than as it affects life, revenue, and many other public interests, inasmuch as the independence and liberties of nations are superior to all other considerations. In Section XVI. of my Exposition to the Cortes (XXV. of the present work) I have taken a view of the policy of Governments generally, in respect to this matter; and I here propose to consider the subject as it relates to Spain, under her actual circumstances.

The very first measure of the Sanitary Code, the appointment of a General Direction which is to absorb the power of Cortes, King, and People, is not only a violation of the Spanish Constitution, but of the fundamental principles of freedom; nor is this objection

in the least removed by diminishing the number of members, as has been done, as a matter of economy, from nine to three. This General Direction, which is to have the power of isolating or incarcerating the whole nation with a dash of the pen, is to be under the authority of a member of the Government. Now, if this Minister for the time being happens to be most virtuous, we know that too much power vitiates and depraves the mind ; and if he be already vicious, he may, with the aid of such machinery, and in conspiracy with internal or external enemies, destroy the nascent liberties of the State. No engine can be better calculated for this purpose than a Code of Sanitary Laws. Had these laws been abolished last year in Spain, other nations would have been obliged to inquire into their true character, and to abolish them this year ; there would consequently have been no cordons of troops, nor foreign support to Spanish insurgents, nor even any insurgents : but if, on the contrary, these laws, under any modification, should be maintained in force even for one year longer, who can guaranty that they will not be one of the principal means employed for the criminal purpose of destroying the liberties of Spain ? Their immediate abolition, then, besides being conformable to reason, would greatly diminish the chances of that catastrophe ; whilst to vote for contagion and the continuance of sanitary laws, would be to vote for a continuance of mortality, expenditure, and insurrection within ; of French armies permanently on the frontiers, and of Spanish armies permanently to oppose them ! What important consequences of a contemptible delusion ! Upon their decision, in respect to this most moment-

ous subject, will depend perhaps more than upon any other circumstance, the character for penetration and patriotism, which the Cortes of 1822 will enjoy in history.

From the transcendent importance of the question at issue to the world at large; from the singular experience which it has been my lot to acquire on the subject; from the political aspect which in various countries it has of late almost exclusively assumed; and from the arts of sophistry and misrepresentation, which are incessantly employed in order to mislead and to deceive, I am led to hope, from the liberality and patriotism of the Spanish Cortes and of their Committee of Public Health, that they will regard with indulgence my endeavours, justified perhaps by the researches of thirty years, to indicate the sources of the errors and mistakes into which, in so difficult a matter, it is not surprising that they should have fallen, or rather it would have been surprising if they had not fallen; they are errors not peculiar to Spain, but for ages common to all Christian states.

The leading error on the part of the Cortes, which I most respectfully take the liberty to indicate, is, that instead of first appointing a Committee to inquire into the validity of the doctrine of contagion in epidemic diseases, they should have taken that validity implicitly for granted, and at once appointed a Committee to prepare the project of a Code of Sanitary Laws, founded upon the bare assumption of the truth of that doctrine. This is literally constructing an edifice upon an imaginary foundation.

Another error was, the appointment of Physicians as members of that Committee; it was certainly most

natural to suppose, that of a question presumed to be medical, physicians should be the most competent judges ; but I have shown that the question of contagion is simply a question of fact, which has been so obscured by the false knowledge of the medical schools, that physicians, from prejudices of education, are necessarily less competent judges of its merits than other men. It has in reality become a matter of medical faith, and hence the impropriety of medical judges. For the purpose of examining the merits of Islamism, if you wished to obtain the truth you would not appoint a Committee composed of Mahommedans. But I do not limit my objection to contagionists ; for if they be biassed by prejudice, non-contagionists may be so by self-love. If it be indispensable to have physicians at all, the only chance of a fair investigation would arise from the appointment of an equal number of each opinion, with persons not of the profession as umpires : these observations are of course general. The very respectable physicians who are members of the Committee, upon whose project I am animadverting, will not, I am sure, do me the injustice to think me capable of personality.

Let me now advert, with entire frankness and sincere respect, to the sources of the errors of the Committee.—1. It could only have been owing to those prejudices of education, and to that false knowledge to which I have alluded, that the Committee could have been betrayed into a conclusion in favour of the existence of pestilential contagion, whilst such ample demonstration of the contrary was before them ; in the Barcelona Manifesto of the fifteen national and foreign physicians ; in my ‘Exposition’ addressed to the

Cortes, &c. ; and more circumstantially still in my “Results of an Investigation respecting epidemic and pestilential Diseases,” &c. ; all of which were in the hands of the Committee.—2. In the Introduction to the project it is said that the leaders of both parties are highly respectable, and that they all state facts, making, as they believe, in favour of their doctrines. There is an incorrectness in this representation which leads to considerable misapprehension. With scientific conclusions, personal respectability, although desirable, has, strictly speaking, nothing to do. And with respect to “facts,” the advocates of contagion have never adduced any ; and considering that the impossibility of the existence of pestilential contagion has been demonstrated, they could never have had any to adduce. It is indeed obvious, that a single proved fact would have been conclusive in their favour. But their statements, voluminous as they have been, have necessarily consisted of nothing else than vague and unfounded assertions. 3. The Committee tell us, in effect, that they have decided in favour of contagion, not because they had any proof of its existence, but because they found themselves in the predicament of being obliged to take a part ; and because they thought that of contagion the safest side for the people. Here I must presume, from their not being all translated into Spanish, that the Committee have not been able to peruse with sufficient attention the works which I have mentioned ; otherwise they would not have abided by authority, in opposition to proof ; for in these works it is shown, by proofs positive, negative, analogical, circumstantial, and *ad absurdum*, not only that sanitary laws are inefficient for their proposed ends, but that

by far the greatest proportion of all the evils incidental to epidemic diseases, are produced by these very laws; together with the other consequences of the belief in pestilential contagion. Can we then look closely at the effects produced by that belief, and by these laws, on life, liberty, independence, property, science, morals, commerce, navigation, and almost all the public interests of States; and then seriously pronounce, that the decision which confirms them is "the safest for the people?" But, whence this necessity of taking a part? Was it deemed indispensable that there should be, at any rate, a sanitary code? Could not the Committee have suspended their judgement, and referred back to the Cortes? And, is it not probable that they would have done so, had there not been so many physicians? Such have frequently been the sources of similar mistakes in other places, and particularly in the country to which I have the honour to belong. In England, physicians, and for the most part such as had no practical knowledge of epidemic diseases, were appointed Members of the Boards that were nominated to draw up regulations for the performance of quarantine. There happened to be among them one physician who had some practical knowledge of the plague; and his opinions, in opposition to the facts which he had himself recorded, were unfortunately received as laws by his colleagues. Dr. P. Russell, the physician to whom I allude, had been in Turkey, and had written a "Treatise on the Plague," scarcely less remarkable for the excellence of its facts, than for the badness of its reasoning. *He* also had his grand project of a central Board of Health, or "*General Direction*," of which

he himself being the greatest or only authority then existing in England, on the subject, would of course have been the president. Fortunately, this project, as far as the general medical direction was concerned, was frustrated; but unfortunately the country remained burdened with those expensive, pernicious, contradictory, and ridiculous quarantine regulations which are now in force throughout the British dominions. So much for the ambition of one man, and the ignorance of his colleagues, twenty years ago. But considering the advancement of the world in knowledge since that period, ought not such measures to operate as a warning, rather than as an example, to other nations? 4. It is remarkable that the Committee, although they think it necessary to take the side of pestilential contagion, as being, in their opinion, "the safest course for the people," do not once venture to say, that there is any proof of its existence. In such a matter, ought not the absence of proof of existence to be deemed sufficient proof of non-existence? Thinking it, however, necessary to say something on the subject, they tell us, that "they feel, or perceive, that the yellow fever is occasioned by contagion, and that it is capable of importation; and that in this they follow the example of England, France, and America." Example is no argument: and precedent is a reason so bad, that it is never had recourse to, but when no good one is at hand. This manner of feeling or perceiving contagion, among nations, was, as I have shown, commenced by the See of Rome in 1547. Since that period, nations have upon trust followed each other in this erroneous course, like flocks of sheep, or flights of wild-geese. The task of elucidat-

ing, or eradicating error, must always necessarily be commenced by some individual or nation. If authority were not sometimes disregarded, no pernicious institutions would ever be abolished, nor any useful innovations ever established. The Inquisition would still have existed in Spain ; and we should not now have dared to talk of the absurdity of the doctrine of contagion in epidemic diseases. There would have been no popular representation, no free press ; and the miseries of the people would have still continued to increase to the utmost verge of their capability of endurance. But, above all things, it is surprising to see authority proclaimed as a motive of action, in an age in which the rapidity of the progress of knowledge both incites and demands almost perpetual innovation, and in a nation still in a state of revolution. Would not the Committee have done better in recommending to the Cortes to set a good example to other nations rather than to imitate their bad ones ? Would they not have done better in advising them to abolish sanitary laws, after the example of New Orleans, than to retain them, after the example, partially, of other States ?

5. Although it is to *all* codes of sanitary laws that I object, as being founded on delusion, inefficient for their proposed ends, and otherwise highly injurious to nations, it may, however, be useful to make some animadversions on that particular project, which now lies for discussion before the Cortes. The articles of the Church of England amount to no more than 39 ; those of the Constitution of the United States of Greece only to 110 ; whilst those of the Sanitary Code in question amount to 400 ; and they might with equal propriety be indefinitely extended. Of such

a code it may be said, that every curtailment, every diminution of its severity is a violation of the principles upon which it is founded. This has happened, in several instances, to the present project. The Committee say that, raising themselves to a level with the knowledge of the day, they have adopted various principles which were not developed by the other Committee: "Such as the not deeming it necessary to direct the domestic separation of the sick and the healthy, and the construction of the five new lazarettoes which were proposed; substituting in their place the idea of not allowing any person ill of a contagious disease to remain in any community; and that lazarettoes of cure and of observation should be always formed of huts or barracks situated in the country and in free air."* Is not all this an abandonment of the doctrine of contagion? If not, what does it mean? And would it not have been more candid, as well as more manly, to have avowed the principle of this change?

The general direction itself, the main spring of the whole machinery, is opposed by four Members out of nine, being nearly the half of the Committee; and the penal part of the code by three. It is, I understand, in contemplation to allow ten days to the inhabitants of a place declared to be infected, to quit it,

* "Asi es que no ha tenido reparo en proscribir las comunicaciones domesticas de los enfermos y sanos, y la construccion de los cinco nuevo lazaretos que se proponian sustituyendo en su lugar la idea de que no permanezca en ningun pueblo, enfermo alguno de contagio; y de que los lazaretos de curacion y observacion se formen siempre de chozas ô barracas situadas en el campo y al aire libre."

before it is put in a state of isolation. I do not know what could have been a more complete renunciation, in effect, of the doctrine upon which all sanitary codes have hitherto been professed to be founded. In these ten days the whole country might be contagioned, if contagion existed. Thus, all the 400 articles being abandoned in succession, each article withdrawn, would be, in so far, a diminution of error, until, by the relinquishment of the whole, we should effect a return to correct principles. The whole superstructure being shown to have been erected on an imaginary foundation, it would be superfluous to prove the absurdity of each of the 400 articles in detail.

The authors of the project, indeed, have themselves, by what they have rejected of the preceding projects, in effect virtually abandoned pestilential contagion; and having abandoned it in effect, why seek to retain it in form? By as much as has been rejected of former projects, this one has increased in inconsistency, in the same ratio that it has diminished in mischief. But by what has been added of original matter, if it could be at all acted upon, it would be rendered pre-eminent both in inconsistency and mischief. Former Committees were contented with providing the usual legal life-preservers of bills of health, quarantine, lazarettoes, cordons, bayonets, isolation of the sick, and suspension of all human intercourse, &c., &c., &c., with a view to alleviate or to arrest what they called, or believed to be, *contagious epidemics*, as yellow fever, and the plague of the Levant; but the last Committee have, by one grand sweep, taken all other diseases, as gout and rheumatism, and even health itself, under their special protection. The pro-

ject of the Commission, appointed by the Government in 1820, states its objects to be :—Art. 1. “To hinder the communication to the Spanish dominions in both hemispheres of the Levantine plague, and of the American plague, vulgarly called yellow fever, and of whatever other *acute*, pestilential, or contagious maladies may be *generated* in foreign countries.”*—Art. 2. And “to indicate, prevent, and combat the causes which produce endemic and epidemic diseases in communities.”† In the project of the Committee of Public Health of the Extraordinary Cortes of 1821-2, the same ideas are more concisely and better expressed. Thus the objects of these two Committees (sufficiently extensive in all conscience) were limited to the prevention of supposed *acute*, contagious, exotic diseases ; and the destruction of the local causes of *endemic* and epidemic maladies. But in the project of the Committee of Public Health of the present Cortes, there is, in respect to the objects of sanitary laws, an important, a fundamental, and a complete change ; a change, which, if it could be acted upon, would render sanitary laws still more destructive to communities :—Art. 1. The object of this code is “to procure for the Spanish people the highest health, and for Spain the highest salubrity.” To this main object, those of the former projects are here made

* Art. 1. “Para impedir que se comuniquen a los dominios Españoles en ambos emisferos la peste Levantina, la Americana, llamada vulgarmente fiebre amarilla, y cualesquiera otras enfermedades pestilenciales ô contagiosas agudas que se padezcan en las naciones estrangeras.”

Art. 2. “Para indagar, precaver, y combatir las causas productivas de las enfermedades endemicas y epidemicas de los pueblos.”

only secondary. The former Committees had only two strings to their bow, "acute, contagious, and exotic," and "endemic and epidemic maladies." But as if apprehensive of the failure of these foundations, the Committee of Public Health of the present Cortes have enlisted into the service, not only all the causes of health and disease among men, but of the salubrity of countries. To the *exotic*, they add an *indigenous* contagion; and to "contagion" they add the terms "infection" and "propagation." Thus fortified in all quarters, they flatter themselves, no doubt, that some foundation will still remain for their code, even when that of pestilential contagion shall be wholly renounced. The acute contagions of plague and yellow fever being disproved, they would still cling as a foundation to the other contagions "*indigenous*" and "*exotic*," which they have here introduced; and when the progress of knowledge shall have annihilated this foundation also, together with "infection" and "propagation," they will still have in reserve, the general, or rather universal objects of "procuring for the Spanish people the highest health, and for Spain the highest salubrity," as foundations for sanitary laws!

Let me give due credit to the ingenuity of this adoption. It is a master-piece of its kind, and well calculated to refute my proposition, that "sanitary laws have no object," by bringing every object in nature under their jurisdiction. But "to procure for the people of Spain the highest health, and for Spain the highest salubrity," by means of a general direction, or of any other authority, would require, of course, besides super-human intelligence on their part, the

subjection to the will of that authority, of every agent in nature, capable of acting beneficially or injuriously on the body of man, or on the surface of the soil. In order to effect these objects, it would be necessary that the three Members of the General Direction should be endowed both with complete knowledge of, and complete power over, all the elements of matter—all the operations of mind—all remedies—food of every quality—drink of every species—exercise of every kind—all institutions, public and private, even that of matrimony itself—arts—commerce—manufactures—navigation—medicine—agriculture—the exact sciences, and in general every existing branch of knowledge, every public measure, and every act, even the most secret, of every individual. But these three great Directors, it seems, notwithstanding the almost infinite knowledge and power which they must be deemed to possess, in order to the due discharge of the functions thus allotted to them, are not to act in all cases entirely according to the dictates of their own judgement, for that might possibly be not quite infallible; but by the unerring and approved regulations contained in the 400 articles of the project of the sanitary code!

It will not be expected that I should enter upon a serious exposition of the inexpediency of entertaining a project, in itself so palpably absurd, and in the execution so utterly impossible. For my part, I cannot perceive any good grounds why the art of preserving public health should be made matter of legislative enactment, any more than the arts of public speaking, public dancing, public walking, public singing, &c., &c., &c. And I may take this opportunity of ob-

serving that I cannot admit the validity of the objections, which have been made in this case, to the employment of ridicule, which is so peculiarly appropriate a weapon in treating of ridiculous doctrines or practices: *Ridiculum acri fortius ac melius plerumque secat res*. But besides the high authority of Horace, in justification of this mode of animadversion, that appears to be in general the most efficient method of treating any subject, which produces the greatest sum of conviction, and is consequently most condemned by opponents.

The singular, extraordinary, and fundamental change, in respect to the objects of sanitary laws, introduced into this code, I must presume to have been adopted in consequence of the discussions which have recently taken place on the subject; but before these discussions had obtained sufficient maturity, and probably by the influence of the physicians, who are a majority of the members of the Committee. Believing the question to be a medical one, and regarding physicians as the most competent judges of its merits, the Cortes very naturally placed them in preference on the Committee. I have since endeavoured to give satisfactory proof that the question at issue is entirely one of fact; of the merits of which physicians are, from prejudices of education, necessarily the least competent, because the least unbiassed, judges: and probably this will be allowed its due weight on the discussion of the project, if it should ever come to be discussed. On this occasion the non-medical members of the Committee would naturally have been disposed to defer to the authority of the physicians, and the physicians to consider them-

selves entitled to that deference. Here there is no blame intended to be attached to any person. The errors have been common to Christendom. The whole blame is attributable to the false knowledge on the subject of epidemic diseases, which has been accumulating for nearly three centuries in the Medical Colleges and Schools. It was Archigenes, I think, who, being asked what was the best part of knowledge, replied—"To unlearn that which is nought." It is also the most difficult. To say that the physicians of the Committee of Public Health, then, in forming the project of a code of sanitary laws, should not have been able suddenly to divest themselves of the prejudices which prevail on this subject, is only to affirm that they have not been able to effect that which it has cost myself upwards of thirty years to accomplish; viz. to unlearn the false knowledge on this subject, which we all carry away, as if it were an invaluable inheritance, from the Medical Colleges and Schools.

Some persons, who are convinced by my reasoning, still argue that the innovations which I propose should be gradually, not instantaneously, adopted. I am of a very different opinion. If there be errors and illusions which it might not be safe suddenly to renounce, there are others which can best be got quit of, by a *coup-de-main*, as opportunity offers. Of this description is the fabric of sanitary laws. In Spain, at this moment, a certain concurrence of circumstances renders the instantaneous abolition of that system practicable, not only without exciting a murmur, but even with applause. But should so favourable an opportunity be lost, it is highly improbable that it will

soon recur ; and before the torch of general knowledge alone can dissipate the delusion, it may yet do much mischief in the world. If such a thing were possible, in the present advanced state of society, sanitary laws, if universally adopted, might go a great way towards restoring general ignorance and despotism, and replunging us into the darkness of the middle ages.

My reasoning on the subject does, or does not, amount to a demonstration. If it does not, my facts may of course be easily disproved and my arguments readily refuted. But if it does, the measures which are necessary consequences of the correctness of my conclusions, ought to be forthwith adopted. And what should hinder their immediate adoption ? If the Cortes be convinced, is not that enough ? What valid obstacles can arise in other quarters to the abolition of the sanitary laws in Spain ? Would the people rise in insurrection to restore them ? None, but such as would rise to restore the Inquisition and every other species of despotism ! What would the people of other countries say ? Would they not say, " Surely, since the representatives of the Spanish nation, which suffers so frequently from pestilences, have been convinced that contagion is not their cause, and that sanitary laws are pernicious to communities, we must have been all this while deluded by our fears, or deceived by our physicians." Would they not desire instantly to follow so enlightened and noble an example ? And as to foreign Governments generally, could this, or any other act of the Cortes, augment their hostility towards the beneficent institutions of Spain ? Whenever it may suit them to interfere

with the internal affairs of that renovated kingdom, will pretexts be wanting? The one in question would be at once too flimsy and too odious a pretext to be avowed. Turkey has not been attacked or threatened, because she has not chosen, and has even refused to adopt, a system of sanitary laws. But if powers of an undoubtedly hostile disposition should object to the abolition of sanitary laws in Spain, ought not this to be an additional reason why Spain should hasten to abolish them? The views of despotic Governments are well known to be directed (and it must necessarily be so for their own preservation) to the destruction of the reformed system of Spain. They are well aware, that if they do not re-enslave her, she will make them free. In general, it seems to be a good rule of conduct to adopt measures diametrically opposite to those which we know our enemies to desire. Do despotic Governments dread and deprecate the abolition of sanitary laws? Assuredly. And can there be a better proof that this abolition would contribute to consolidate the new system of liberty in Spain; to obviate internal disorders*; to defeat the nefarious projects of her external enemies; and to transmit the Cortes of 1822, with an honourable fame, to distant generations? Did this destructive system even not affect so injuriously life, revenue, science, morals, commerce, navigation, manufactures, and so many others of the best interests of communities; the duty of self-preservation, the first law of our nature,

* Together with every other evil incidental to pestilences, demoralization is greatly increased by the system of sanitary laws; and consequently disorder, anarchy, insurrection.

would still enjoin its prompt and formal abolition : for if liberty and the Cortes do not destroy the system of sanitary laws, the system of sanitary laws may contribute to destroy liberty and the Cortes.

Considering the great additional light which has, during the present Session, been thrown upon this subject, I cannot suppose that the Cortes will now think it right to entertain any project of a sanitary code, until the validity of the alleged foundation of such code be first investigated. But merely to postpone discussion, will not, should the ensuing season prove pestilential, be sufficient to obviate the calamities incidental to the operation of sanitary laws ; since the existing regulations, being unrepealed, would remain in force ; and, according to probable estimates, 100,000 lives, and 800 millions of reals, might be the sacrifice to Spain, in the course of a single season.

I therefore most humbly beg leave to represent to the Cortes the expediency, or rather the indispensable necessity, in order to obviate that sacrifice, of a formal repeal during the present Session of the existing sanitary regulations ; substituting for them some provisional measure, as perhaps the discretionary authority of Commissioners, in such cities or provinces as might have the misfortune to be afflicted with pestilence, until the whole of the subject should undergo the deliberate revision of the legislature.

As it is equally against the interests of science and of legislation, that knowledge should remain dormant in the archives of Committees, or that it should be served out to the public only in the proportions which to such Committees may seem meet (by which it might be liable to be misrepresented or misinterpreted) ; and as it

is essential to the general welfare, in cases like the present, more especially that communities should be kept duly informed respecting both the nature and the foundation of the laws or regulations by which they are to be governed ; I would, in addition, respectfully submit to the Cortes the two following propositions :—

1. That they would be pleased to direct the Barcelona Manifesto of fifteen national and foreign physicians; my Exposition concerning the sanitary laws, &c.; and my ‘ Results of an Investigation respecting epidemic and pestilential Diseases,’ &c. (the latter being previously translated into Castilian), together with such other works as may be thought *à-propos* to the subject, to be referred to a Committee, not however composed of physicians, for the purpose of ascertaining whether in these works the question respecting the existence of pestilential contagion be irrefragably decided ; or whether any and what further measures are necessary to that effect.
2. That in order to facilitate the necessary innovations in that matter, a plan should be adopted for enlightening the people in general by means of publications adapted to common comprehensions, which might be issued, perhaps, in the form of an ‘ Epidemic Catechism,’ under the authority of the Municipalities, or any other of a competent kind.

CARLOS MACLEAN.

Madrid, Fonda de San Fernando,
June 15, 1822.

Subsequent events in the Peninsula will be a commentary on the justness generally of the preceding views. Upon the presentation of the foregoing Critique to the Cortes, it was referred to their Committee of Public Health. Dr. Seoane having previously informed me that the President, Señor Gomez Becerra, had objected to the appointment of a Special Committee to examine my observations (these matters are generally decided by the President for the time being), inquired if I had any objections to their being referred to the Committee of Public Health. I replied, "By no means. Having written them solely for the public good, do with my observations whatever you think in that view most expedient. It is indeed not the most consistent thing in the world to refer remarks to the persons upon whose works they are principally a criticism. But I have a full reliance that those gentlemen will not do them injustice; and that in whatever way they may be for the present disposed of, they will ultimately produce the intended effect." I was persuaded that, by the various representations that had been made, and the various measures which had been adopted, the subject was now so far elucidated in Spain, that if all projects of sanitary laws should not be in the mean time abandoned, the Cortes would, by the ensuing session, be enabled to come fully prepared to the discussion, and that the issue would probably be triumphant for the cause of truth and science; and I now feel great satisfaction in reflecting that I persevered, contrary to many sage and friendly advices, in stopping at Madrid to the end of the session, by which I was enabled to avail myself of every favourable occurrence for the promotion of

the object of my journey. At present, circumstances lead me to entertain the pleasing expectation, that, in no long time, this most interesting subject will undergo a rigid examination by the Legislatures of Britain and America at least, whose example must necessarily be followed by other nations. And thus the rare phænomenon will, I trust, be presented to the world, if for the first time, of nations vying with each other in the elucidation and adoption of correct principles of transcendent importance, and of universal applicability.

On the approach of the period fixed for my departure from Madrid, I was presented, by the Medical Academy of that city, with a diploma enrolling me as one of their members.

The Spanish Government were also pleased to confer on me the honour of the cross of Charles III., which was notified to me as follows, by the Minister of the Interior:—"Government of the Peninsula, Section of Beneficence and Health—I have of this date communicated to the Minister of Grace and Justice as follows: In order to recompense in some manner the important services rendered to humanity by the English physician, Don Carlos Maclean, in proceeding, at his own expense, from London to Barcelona, under the critical circumstances in which that city experienced all the calamities of the yellow fever, with the philanthropic object of observing the nature and progress of that malady; and in also presenting, as the fruit of his interesting investigations, a printed Exposition, manifesting the principles on which that celebrated Professor founds his opinion of the non-existence of contagion in the

yellow fever ; His Majesty has been pleased to invest the said Don Carlos Maclean with the cross of the Royal and distinguished order of Charles III., directing, at the same time, his Exposition above mentioned to be transmitted to the General Direction of Studies for their opinion in a matter of such great importance. By order of His Majesty, I communicate this to Your Excellency, that you may take such measures, in consequence, as belong to your department. By Royal command, I transmit this for your information and satisfaction. God preserve you many years.

(Signed) “ Moscoso.

“ Palace, June 23d, 1822.

“ *Señor Don CARLOS MACLEAN.*”

Like the reference of Citizen Chaptal to *L'Ecole de Medecine de Paris*, and of the British Privy Council to the London College of Physicians, it was not probable that this consignment of my Exposition to the “ General Direction of Studies” would be attended with any advancement of the inquiry. Notwithstanding the clearness with which it was shown, in that work, that physicians are, of all others, the persons to whom a reference on this subject ought to be avoided, it was immediately referred by that “ Direccion de Estudios” to the Academy of Medicine of Madrid. There being, however, no remedy, I personally canvassed the members, that, as I was on the eve of quitting Spain, they would favour me by making their report as early as they conveniently could ; without at the same time entertaining the least expectation that it would be either favourable or argumentative. From the known opinion of the majority of the Academy on

this subject, there was no probability of their deviating from the received notions ; but experience has shown that it would have been useful to the investigation to have been in possession of their *dictum*, and of the grounds upon which it was founded, whatever these might be. This, however, was but a subordinate and a mere *pro forma* reference, for the real investigation was in the hands of the Cortes ; and, fortunately for the truth, there was with them an efficient responsibility, which did not attach to the agents of the Executive, or to the bodies whom it might consult ; and my representations, as is obvious from the postponement in June of the discussion of the project of the code of sanitary laws, from the complexion of the debate upon its being presented in October, and from its ultimate fate, had made a deep impression on the Legislature. But the session being ended, there appeared to be no further object, connected with this inquiry, for my remaining in Madrid ; and I quitted that city on the 12th of July 1822. I have, since that period, repeatedly applied to the Spanish authorities for the Report of the Direction of Studies, or of the Academy of Medicine ; but without being able to obtain it, or even to ascertain whether any had been made. This could not have arisen from the mere circumstances of the times ; for, from the period of the reference to the "*Direccion de Estudios,*" to that of the Cortes and Government quitting Madrid, a complete twelvemonth had elapsed. Nor could it have been owing to the little importance attached to the subject ; for no subject can be more interesting, in Spain, than that of the sanitary laws. The probability is, that, the Report

being in the true orthodox style, its authors, like the authors of the London College of Physicians to the Privy Council upon the same subject, were sensible that it could not bear the light, and still less an accurate dissection, and therefore used their influence with the Government to suppress it, as the majority of the French Medical Commissioners to Barcelona had suppressed *their* Reports, after one had been put in circulation and another promised; so that, when I passed through Paris in August 1822, I could not have procured a sight of even that which had been printed, had not Mr. Galatin, the Envoy of the United States, favoured me with a perusal of a copy which had been presented to him by Dr. Pariset; from the contents of which it was very clearly to be deduced, that its suppression was one of the most discreet acts connected with the proceedings of that Commission. Intrigue has been throughout the favourite, and I may say almost the only, weapon of my opponents. But even of that they will soon be disarmed. In this respect I found a remarkable difference between Madrid and Barcelona.

SECTION XXIX.

DEBATE OF THE CORTES ON REJECTING THE PROJECT
OF A CODE OF SANITARY LAWS OF THEIR COMMIT-
TEE OF PUBLIC HEALTH.

“A Senate House wherein three hundred and twenty men sat consulting always for the people.”—1 MACCAB. viii. 15.

Presidency of Señor Salvato (one of the Deputies for Catalonia).

ON the 19th of October 1822, the Cortes proceeded to the discussion, in its totality, of the project of the Sanitary Code.

Sr. Isturiz (Deputy for Cadiz). I oppose the admission of this Code, because there are many reasons with which it may be combated; and upon the whole it appears to me that its dispositions are not appropriate, seeing that it is not known to a certainty, whether the maladies which are its objects be contagious or not. But passing over that question, and supposing that contagion really exists, and that there is a necessity of employing means to obviate it, I think that in such case we ought to have recourse to remedies more fitting and of another kind. Having resided in a sea-port town, which suffered from yellow fever before any other part of Spain, I know by experience the inefficiency of many of those measures called sanitary. When in the year 1800 that fever

appeared in Cadiz, notwithstanding we had a Captain-general, who exercised the most despotic authority, all who chose entered and went out of the city, and I was one of those who then entered, and thus speak from personal experience.

The same thing happened in the subsequent years, in which the fever prevailed, and this very year a lazaretto has been constructed in a place called the Aguada, from which, notwithstanding it was guarded by troops of the line, forming a rigorous Cordon, every person who pleased went out, and in fifteen days they all disappeared. If the Cortes admit this project, which in my conception goes to create a new sanitary nation within the Spanish nation; if they approve of a Code which it is impossible to carry into effect, since its provisions have the same defect with all preceding ones, together with that of being highly complicated, it appears to me that they will have decreed a thing entirely useless and very oppressive. Individual interest will always be repugnant to measures which are contrary to sound reason and to the principles of justice: besides, the project in question is immensely expensive, and I must think that when the Committee formed it, they did not bear in mind the state of the nation, and, that when it cannot maintain Guarda Costas, so necessary under many points of view, still less can it afford to maintain the establishments, and to incur the expense proposed by the Committee.—The orator, after some further reflections, concluded by declaring that the project, which from the severity of its provisions appeared to be traced by the pen of a Draco, did not in any manner meet with his approbation, since it could produce only

mischief and discontent, without any one positive good or advantage.

Sr. Pedralvez (a physician, member of the Committee of Public Health, and their reporter). The preceding speaker has opposed the project which is under discussion, and I believe that his objections may be resolved into the following questions: 1. Whether there be contagion or not? 2. Whether, supposing contagion to exist, it is to be obviated by the means pointed out in this Code, or by different and opposite means? 3. Whether these means be adequate to the object sought? 4. Whether the laws of this Code be conformable to the dictates of general utility? and 5. Whether the expenses which are to be incurred by their observance, be conformable to the situation of the State?

The first question is the most interesting, viz. Whether there be or be not contagion? because if there be, sanitary means are indispensable; if there be not, it is necessary to renounce all projects of a Sanitary Code. In examining this question, it is necessary first to state what the word *contagion* means; towards which, it is indispensable to explain the signification of two other words, which may be allied to, and confounded with it, viz. *endemic* and *epidemic*. An endemic disease is one that is contracted by the natives of a country, from causes permanently existing in it, but which, although it may be *translated* to another country, is not *propagated*; and an epidemic malady is one that is contracted by the natives of a country, not from a vice permanent or inherent in it, but from external causes, and when *translated* to other countries, does not occasion sickness among its inhabit-

ants; but a contagious malady is one, which contracted in any country, attacks individuals of other countries, having a disposition to receive it; so that in this sense contagion may be called *propagation*.

Contagion has defenders, and it has also great opponents; but although weighty arguments have been alleged in favour of this latter opinion, the opposite one has also been sustained with strong reasons, amongst which it has been proved, that the dispositions under which the evolution of yellow fever or contagion takes place in any country, are humidity, absence of ventilation, and want. The yellow fever was unknown in Spain, until by the discovery of the New World a communication was established between the people of the Peninsula and the inhabitants of those regions from whence it came. At Cadiz, it was from thence that this pestilence manifested itself for the first time in the year 1730, and returned in 1731. And when was that? When the light expeditions of Continental Spain with America commenced. The second which afflicted Spain was, when our commerce commenced with the United States, which occasioned the increase of that evil. It was introduced into some parts of Spain at the epochs mentioned, because the precautions were abandoned, which prevented its introduction and importation.

I have shown that hitherto the yellow fever has not been generated in Spain, but has come from America, and has been introduced when measures have not been taken to obviate it. When good precautions are adopted, the fever is not evolved in any country, although it should have all the dispositions necessary for the introduction of contagion; but when they are

wanting or neglected, it is communicated to places very distant from the sea, as happened in Spain with respect to Cordova and La Carlotta, contrary to the opinion of foreign physicians, who maintain the fever to be littoral, and incapable of extending beyond three leagues from the coast.

It was also for want of precautions that very airy and most healthy places, as the Rambla, Jimena, San Roque, and the Puerta de Santa Maria, were afflicted with this malady; whilst, by observing these precautions, other unhealthy, ill-aired, and even marshy and low places, as Chipiona, remained free from it. Similar precautions preserved San Lucar and Puerto Real from 1800 to 1820; and it is to be noted that this last place, by suspending its dispositions in the confidence of safety from its situation, opened its gates to contagion.

Let us prove more clearly the existence of contagion, by showing that this malady is also communicated in free air. In 1785, two English frigates took two French frigates with the fever: they were in the open sea; and, notwithstanding, of fourteen seamen sent to man the prizes, nine fell victims to the contagion, and the five remaining died of it in Halifax: hence we conclude that it is not the air, or the atmosphere, as many have sought to maintain, which produces this malady, but that it is a malady which goes with the subject itself. It is a malady which *possesses the grand property of regenerating itself, by being produced in the manner of a species of seed which, under a given disposition, develops itself rapidly.*

I have given, as I think, strong proof of the existence of contagion; the mode of obviating it has been

taught by experience. In Barcelona, many persons have kept free from this malady by avoiding communication with the sick: by this isolation, great numbers have preserved themselves in the very focus of the contagion. In the very port, and in the garden of St. Beltran, they kept free from it. The guard of the Lantern remained constantly at its post, without permitting itself to be relieved, and preserved itself by the same precautions; the House of Charity in Barcelona, and some convents contiguous to the General Hospital, which was full of the contagion, remained exempt by means of similar dispositions: the contrary happened in the Convent of Penitent Monks, who, actuated by charity, preserved various furniture of some citizens, by which they introduced the fever into their house: thus, cutting off communication is one of the legal dispositions inculcated in this Code.

The preceding speaker has said, that although the existence of contagion were certain, it could not be obviated by this Code, since fear has a great share in its propagation. I believe I can reply to the Hon. Gentleman by facts. Children, who have no fear, and women, who have much, present the most convincing answer: children without fear die of the fever, and the number of deaths among women is always proportionally less. Contagion, then, is not the offspring of fear; but something real and existing.

The former speaker has also said, that the laws which form this Sanitary Code are harsh and cruel, and as if they had been written with the pen of a Draco. What I shall say is, that the pen which has written those laws was directed by the hand of a subject into whose heart no sentiments of inhumanity

have entered, and that they were dictated above all things by the love of humanity. I know that there is severity in the dispositions of the project ; but I also know that there ought to be a little rigour amongst mild regulations, for the same reason that the Greeks adored Jupiter the God of Heaven, and Pluto the God of Hell, that the former might favour and the latter not hurt them. The laws are harsh, says he ; and wherein does the harshness consist ? He will answer me, What greater harshness than to condemn to death the persons who infringe those laws ? Will he, then, who is the cause that a whole province, or a whole kingdom, is overrun with contagion, expiate his crime by the small sacrifice of his life ? If we owe life to society, if society has a right of self-preservation ; can there be a doubt, that whoever occasions the death of a great number of the individuals who compose it ought to forfeit his life ?

According to the argument of the preceding speaker, he who transgresses a sanitary law may allege that he does no more than follow the impulses of instinct, than obey the propensities of nature. But is he who commits a robbery on the highway, in order to relieve his necessities, to escape with impunity on account of the motive by which he is actuated ? No, sir ; since, if he who prejudices another, whatever be the motive which actuated him, is punished in proportion to the individual grievance, is there not greater reason to punish him who has done mischief to many ? Thus, then, this law is just and wise, since it obviates crimes, and consequently the mischiefs of the malady, and because the contagion would prefer an uncertain death from disease, to a certain death by the law.

Señor Isturiz has also said that these means are impracticable; and I ask, In what consists the impracticability? Does this plan chance to include any impossibility to impede its execution? Does the want of means happen to be one of them? But, sir, when the end is necessary, the means are indispensable. And now I come to the last objection of the preceding speaker. This Honourable Gentleman says, that a great expenditure is organized; but although in effect a great expenditure should be occasioned, if it be necessary to the nation to incur it for its preservation, it ought not to be refrained from, considering the high importance of the subject.

I conclude, then, by requesting the Gentlemen who endeavour to impugn this project, to reflect on the sacred end to which it is directed, which is no other than to procure for Spaniards the highest health, and for *the Spains* the highest salubrity; and to prevent the generation, introduction, or spreading in Spain, of any disease *suspected* of infection, propagation, or contagion, whether of the country or indigenous, or foreign or exotic.

The Minister of the Interior. I do not think that the question of the day ought to be regarded as a medical question, since there have not been a sufficient number of experiments to prove that the fever is not contagious. Consequently the Government cannot excuse themselves from adopting all the precautions which are practised by the most cultivated nations of Europe, until that be proved in an incontrovertible manner. Thus then the Government is of opinion, that there ought to be a code capable of preventing the introduction and propagation of this

class of maladies. I shall not enter into an examination of the medical part of the project with which the Cortes is occupied ; but shall limit myself to speaking of the organization of the Juntas of Sanidad, and of the authorities which are to be engaged in this important department. There is, in the first place, a General Direction of Public Health, composed of three individuals, endowed each with 40,000 reals, upon whom depend other officers, whose allowances are not yet fixed ; and this direction is to report to Government upon every thing depending upon the health department. This method is unfavourable to the quickness of dispatch necessary in matters of such urgency ; and there is besides no need to create functionaries for the performance of duties, which can be discharged by the Minister of the Interior, in whose sections there ought to be persons conversant in this department.

Moreover this Junta is depressive of the authority of Government, because it is reduced to the necessity of petitioning them for information, and at the same time obliged to pass to them whatever it receives. Its authority is at the same time limited in respect to filling up the offices of Directors, since the Government only nominates for the first time those who are to compose the Direction ; but in future the Members themselves are to propose three fit and proper persons in the respective classes in which the vacancies shall occur, from among whom the Government is to choose the persons whom it thinks best. This disposition, to the extent, as I have said, of depressing the authority of Government, is unknown to the Constitution, which does not recognise this ternary mode of election, ex-

cepting for the Magistracy. This Junta has besides the very serious defect, in my opinion, of having at its order a portion of subaltern Juntas, which, if they may be necessary when the nation is infected with fever, I cannot think fitting when that evil does not exist: besides, it would be to create a new authority.

The legal part of this regulation is also, in the conception of the Government, not so mild as it ought to be; since, although punishment is graduated according to the evil which may be occasioned, those cases are excluded in which delinquency arises from ignorance.

In the conception of Government, it is fitting that there should exist a sanitary code; but it does not consider the establishment of the Direction proposed as convenient, or that the subaltern Juntas should possess the character of perpetuity which is sought to be given to them. The functions which are confided to the Direction may be performed by the Sections of the Minister of the Interior; which, in the degree that it is convenient, is also economical, since, in this manner new creations of offices, and consequently an increase of burden to the nation, would be avoided. All these inconveniencies would result if the Cortes was to conform to the proposition of the Committee.

Sr. Pedralvez defends the Report from the imputations of the Minister of the Interior. Article 10 of the 3rd Chapter says, that "the General Direction shall depend directly upon the Minister of the Interior." He therefore denies that it curtails, in any respect, the authority of Government; but affirms, on the contrary, that by supplying it with "a consulta-

tive facultative Junta," which shall prevent its falling into error, and enable it to carry into effect the measures traced by it, without the molestation of labour and meditation, it confers upon Government great advantages. The Direction, far from diminishing the authority of Government, would, like an additional wheel, give fresh strength and fresh lightness to the machine.

His Excellency has also said, that this Direction would be very expensive, even if composed of only three individuals: but he must have heard that in a very enlightened nation, France, it has been proposed that a Direction of Public Health should be composed of *fifteen* Members. The Committee has therefore, in this matter, adopted a very economical course. Posts, Lotteries, &c., have their Directions. Is the Department of Public Health per chance less interesting to the Nation? Moreover the Direction proposed is merely consultative, and without it *la Sanidad* can never be well organized, since although the knowledge of the present Secretaries of State be great, they cannot be equal to an affair so delicate.

Far from being a burden, as has been affirmed, I say that this Junta, at least hereafter, will be a source of revenue to the State, and that they will defray their own expenses *out of the sanitary funds*.

Although the public health might be preserved without this Direction, it could not be preserved with the same perfection; for let us undeceive ourselves, Señors, *it happens with contagion as with birds*; we may catch them in their nests; but when fledged they fly: and thus I think that the Committee could not have better accomplished their object.

Sr. Alvarez (D. Elias). I am of opinion, that previous to discussing this project we ought to have examined the question whether yellow fever be contagious, or not ; for besides the opinions of many physicians and illustrious men, a Manifesto was presented to the Cortes in the last Session, in which it was decided in favour of the non-existence of contagion, and even the Committee itself, it appears to me, are not unanimous on this point. Finally, the fact is, that the question concerning the contagion or non-contagion of yellow fever is not resolved ; and seeing that a sanitary code is presented to us, all the articles of which are founded on the supposition of the existence of contagion, I am of opinion that it *ought not to be approved, but that we ought to examine the aforesaid preliminary question.*

In all his discourse Señor Pedralvez has given us no evident proofs of the existence of contagion, and the Committee says that the most secure path to keep the people free from contagion is to adopt these means ; but seeing that various classes of lazarettoes, of quarantines, and of sanitary Cordons, even to three, are proposed to us, I can do no less than say that these laws are cruel, and that themselves conduce to contagion, since, besides other inconveniencies which would arise from their execution, one would be, that they would be eluded, and for that reason alone I consider the project as useless.

Sr. Seoane (a physician, and a Member of the Committee of Public Health). I would with much pleasure have first entered on the question of the existence or non-existence of contagion, if the last speaker had not attacked the project with opinions in

favour of its non-existence. It is true that this question is not decided ; it is true that physicians are not in accord upon this point, nor are even the individuals of the Committee ; but, notwithstanding, we all united, when it was agitated, whether means for preventing it should be adopted, or not. I myself am inclined to believe that it does not exist ; but since among so many experiments which all Governments should direct to be made on this particular, we are yet not instructed, ought we to abandon sanitary means ?

To the present moment this point has not been taken into consideration, and nothing more has been done than to authorize the Municipalities to adopt all such means as they might think useful without any restriction ; but in the Committee there are horrid documents, showing to what a height despotism had reached in respect to sanitary means : it is sufficient to say that a Deputy coming from Barcelona had to suffer *five* quarantines from *five* different Juntas of Sanidad, before arriving at Madrid. And if this happened to a Deputy, what vexations must other individuals have suffered ! Thus, what is necessary to determine, is, means that shall shorten the contagion, without oppressing the unfortunate. The sanitary code presented by the Committee is, in truth, very extensive, and it has been called, by one of the preceding speakers, an excessive code of regulations : it would have been very easy for the Committee to have presented only bases ; that is, to have presented, for example, an article, establishing that no vessel should sail without a patent, forming afterwards a regulation concerning this measure, and so on of the rest. But as the Government recommended the urgency of this code, on

which it presented a project to the Cortes, the Committee found themselves under the necessity of proposing measures to the Cortes, which, if they think that they ought to be reduced, the Committee will feel no inconvenience in reducing.

It has been said, that this code is impracticable, and, in effect, I believe that it would share the fate of other measures; since I see that the more the Cortes have persisted that there shall be no contraband, the more incessant it has become. But I would ask, Because the authorities have not employed sufficient energy in causing these measures to be carried into effect, are we therefore to have no sanitary laws?

It has always been objected, that it would be very costly. But the Committee have done no more than the Commission of Government had proposed in the preceding Cortes, in its project of establishing, among many other things, a Direction of Public Health. In that project, much more extensive attributes were bestowed on the Direction. Moreover, the Committee, distrusting themselves, called upon the former Minister of the Interior, and asked him if he could carry into effect the regulations of sanidad, without the necessity of having a consultative Junta, and he answered in the negative. Until now the expenses have been great in the sanitary department; and the Committee have deprived all the Faculty of the pay that they held, as members of the Juntas, and have proposed many other reductions, allowing only a salary to the Secretary of the Littoral Juntas, and that only temporarily, differing from the opinion of the Commission of Government, which granted salaries to all; and concluded by manifesting that the Committee acknow-

ledge that this is not the proper time for discussing the sanitary code ; but that it is necessary, in order to obviate the despotism (*arbitrariedad*) of the Provincial Juntas.

I am an enemy to the centralisation of all the departments ; because I believe that the regulations of beneficence cannot, at this day, be by any means carried into effect in such a manner. If this Committee have proposed to endow the individuals of the Direction with 40,000 reals each, it was because the Committee of the former Cortes, putting them on a footing with the members of the Direction of Studies, fixed upon that sum ; and, finally, it is established that that isolation (*incomunicacion*) which has been heretofore observed in communities afflicted with pestilence, shall not take place ; and that the sick shall go out into the country, which is the best mode of cure : on which account I am of opinion that the Cortes ought to agree to this project of a sanitary code.

Señor Valdes (Don Cayetano).—I must oppose the project, as considering it *worse than contagion* ; since, in seeking to prevent an evil, which may sometimes be uncertain, it will occasion real ones, and will never succeed in shortening contagion. Let us suppose Madrid to be contagioned ; if it were to be isolated, what would follow ? That the people of the environs would not bring their provisions, and that the inhabitants would die of a malady for which no cure has yet been discovered, hunger and want of food ; and at the same time the inhabitants of the neighbourhood would have no vent for their provisions. Further, would it be possible to isolate Madrid ? I think not. In a vessel the evil might be restrained ; but on land it could

not, because the intercourse of communities cannot be cut off. Moreover the project is useless, because, if from a vessel coming from America, after having been made to perform quarantine, the disease may be propagated after five months, it is clear that the contagion may lie five months in an occult state, and consequently that no precautionary measures can ever be successful. Let us suppose further, that one of a community is seized with yellow fever; it is clear, that if he did not come from America, it could not have been brought from thence; and I ask, Where is the person to be found who has communicated it to him, or those to whom he has communicated it? These measures must be admitted to be a nullity.

The passports which are required in this project are of no use; for we know that *the suspected may procure them for one dollar, two dollars, or a doubloon, &c. : for the poor alone there is no passport; and they are shut up in a lazaretto, as suspected, there to die.*

It is said to be very possible to shorten contagion; but, what measures are to be adopted in a community where two or three hundred fall sick daily? None. Unfortunately I have suffered sixteen quarantines, in which I have experienced sixteen thousand vexations; and what followed? That the very persons set over me as guards invited me to infringe the quarantine. It is for these reasons that I consider this Code as useless, and that I oppose the Cortes, declaring that there is ground to vote upon it.

Señor Trujillo (a physician, and a member of the Committee of Public Health of the Cortes).—My opinion is strong in favour of the existence of contagion.

Five out of the six members of the Junta of Barcelona have maintained the contagious properties of yellow fever ; many other professors have thought in the same way ; and I observe upwards of a hundred of the Faculty scattered throughout Cadiz, and who had an opportunity of observing that terrible malady, have all agreed that it is contagious ; and I observe, in fine, that all the nations of Europe, as well as of America, have adopted measures for preserving themselves from its effects : but *it is not, and ought not to be the question of the day, whether yellow fever be contagious or not, since the greatest elucidation which experiments give us has decided it.*

Señor Valdes has impugned the Report of the Committee, considered with respect to isolation (*incomunicacion*) ; but the Honourable Gentleman has not held in mind, that the projected measures are very different from those which have been hitherto practised in empested communities. We have seen cities and villages totally isolated, and encompassed with troops who would not permit any one to appear even at the windows ; and I would ask the preceding speaker, Have the Committee in their project adopted such measures ? They have only treated of obviating, as far as possible, the terrible azote of pestilence ; and thus no less could be done than to present the project for discussion to the Cortes : on which, in my opinion, they ought to declare that there is ground to vote in favour of its totality.

Señor Casas.—I agree that it is necessary to take useful precautions to cut short those maladies which are reputed contagious or epidemic ; but having regard to what has been set forth by some of the pre-

ceding speakers, I wish to offer some observations, ignorant in the matter at issue, because, not being a professor of medicine, I cannot speak with due certainty. I have heard some physicians say that yellow fever is not contagious; and even add, that to believe the contrary is a very gross error, and consequently that it is scandalous that laws should be proposed on this account. I remember also when it was held that the fever of phthisis was terrible for its contagion, it being believed that even such as approached the house of a consumptive person was liable to be contagioned. At present, it is regarded as a prejudice that this disease propagates itself; and none, except a coward, is afraid of sitting by the side of a phthisical person. But independent of this, and although all these diseases should be really contagious, I should deem the regulations proposed to be useless, and even prejudicial. I have been among communities which have considered themselves as contagioned by an epidemic, as was the case in the province of Murcia, in the year 1810. The army, which was called of the centre, was then stationed there: we retired from the capital to the distance of about two leagues, where we found ourselves surrounded by the contagion; and notwithstanding the great number of persons of different provinces that were assembled at these points, this malady was not communicated. On the other hand, it is very certain that it is impossible to cut off all communication between an empested community and the surrounding neighbourhood. This is the principal basis upon which the Committee has founded its project, which, as has been well observed by Señor Valdes, it is impossible to carry into effect; *because*

men cannot be condemned to die really and effectively isolated, as would happen in this case. Sanitary precautions occasion a terror, which is, as it were, the fundamental origin of the pestilences of communities, and cause greater evils than those pestilences themselves.

Often have I reflected on this matter, and I have no hesitation in saying that, in my opinion, *the most terrible phenomena, and the most cruel symptoms of the epidemic diseases reputed contagious, are Juntas of Sanidad and sanitary regulations*: he alone can know this who has been in an empested community, where there is nothing but confusion and trouble; parents without children, and children without parents; the veteran warrior, who has been constantly exposed to the danger of losing his life, trembles and looks pale; and, finally, the result is, that although it be but a simple constipation that prevails, in such circumstances the greater part of the community perishes. *The very physicians who are destined to make observations on these maladies generally make them at the entrance of a street, and do not even venture to feel the pulses of the sick.* With respect to lazarettoes of observation, I ought to say that, in my conception, *they are nothing else than places in which those who are considered empested are buried alive*; since they consist only of a miserable precinct in the fields, in which there is nothing to eat, or to drink, or even to sleep upon.

To witness this, it is not necessary to go very far. Will those inform me who have been in the lazarettoes of Valverde, what means they met with there for cutting short a disease? And is not this want of means

sufficient to cause a healthy and robust man to perish? Is this a mode of preventing persons from being contagioned? Besides, how is it possible that a village should establish a lazaretto of observation, and another of expurgation, with the medicines and provisions necessary, if there be such an absolute dearth of money? This is a reason, which all the world may know, why lazarettoes cannot be established upon the footing on which they ought to stand, in order to be useful; and the consequence is, that, in their actual state, they can serve no other purpose than to incommode travellers, and to be the means, if an epidemic does not prevail, of producing an evil many times greater. For these reasons, I oppose the approval, in its totality, of the project which is under discussion.

Señor Lopez del Bano (a member of the Committee of Public Health of the Cortes).—If it had not been proved to demonstration that there are contagious maladies, the reflections of the preceding speaker would have been much to the purpose; but agreeing in that, what we have to consider is, whether the means proposed by the Committee are capable, or not, of obviating the contagion of these maladies. All the world knows, that, to prevent the propagation of *endemic* infirmities, the best mode is that of isolation, and that it is one of the principal bases proposed in the Project; but without depriving empested communities of all those resources which are necessary to them. It is also proposed, that the first individuals who are affected with these diseases should be taken to lazarettoes provided with all necessaries for their cure. With the design of rebutting this basis, the preceding speaker has affirmed that the lazarettoes are

unprovided with every thing ; and I must contend that this is not the fault of the law, but of the authorities, who do not employ all the means that in such cases ought to be employed. The reason why it is sought to isolate the sick attacked with contagion, we there say, is no other than *to exterminate the disease in its focus*, whether its origin be contagious, or it arise from circumstances affecting the communities in which it prevails. And what motive can prevent the employment of these means, even in regard to *endemic* infirmities ? I know not ; but I think, on the contrary, that it is absolutely necessary that these measures should be adopted, declining, like the Committee, to propose other means which had been heretofore used without the desired effect. Thus, I consider the propositions of the Committee applicable, even in the case of negating the contagion of *endemic* infirmities ; and I am of opinion, that the Cortes ought to admit the Project in its totality, although some modifications in its articles should be made.

Señor Romero.—In my conception, the totality of the Project resolves itself into four points, viz. the authorities charged with the sanitary police ; the measures proper to be adopted ; the penalties which are to be inflicted on those who infringe the sanitary dispositions ; and finally, the dispositions which ought to be taken, in order to preserve the health of communities. As to the first point, I shall not repeat the observations made by one of the preceding speakers, by which he has demonstrated that there is no necessity for establishing sanitary Juntas. Experience has confirmed that these Juntas of Sanidad serve no other purpose than to paralyze the measures of Government

respecting contagioned communities, frustrating the good effects that would otherwise be produced by them. Thus, then, the Municipalities being to direct all the necessary dispositions, on the development of an epidemic malady, I consider the co-operation of these Juntas of Sanidad useless, which, if it were only to display and exercise superiority, would contribute to hinder the cutting short, as promptly as would otherwise happen, of an epidemic disease. With respect to the means proposed for preventing the propagation of contagion, I shall not enter into an examination of them ; but, being to impugn the Project in its totality, the Committee will permit me to limit myself to speaking of the Chapter of Lazarettoes, and of the police in respect to vessels. These two objects ought not to be comprehended in these regulations, at least according to the plan adopted by the Committee, since they say that particular regulations will be formed for lazarettoes, and for naval police ; and, in that case, the articles prescribing rules for their organization are here useless. Otherwise we should have but duplicate laws or regulations, forming a code more bulky than the most recent compilations. Respecting the third part of this Project, I must repeat what has been pointed out by several of the speakers who have preceded me, viz. that the penalties established by it are excessively severe. In Article 323, for instance, it is said, “ The professor who reveals the declaration he may have made, of a disease not being pestilential or contagious, contrary to the Report (*dictamen*) of the Physicians, shall pay fifty *pesos fuertes* of mulct, even if the event should correspond with his judgement ; and if he should be in

error, he will incur a double penalty." This is a most disproportionate penalty ; and, besides, prevents the physician from performing a very simple act, which cannot occasion great evils, and punishes him in the same manner as if, after having declared a disease to be contagious, he had propagated the contrary, in which case evils of the highest degree might be produced. If this Article be compared with 331, which says, " That every resident who omits to give information of any sudden death, with pestilential symptoms, that happens in his house, shall be fined in sixty dollars," the disproportion will be seen ; for the physician who reveals a declaration that he had made of a disease not being contagious pays sixty dollars of fine, and is besides suspended from the exercise of his profession for a period of between two and four years. But there is even more. In Article 339, it is said, " That whoever shall leave a lazaretto or a suspected community, and shall enter a healthy one, without the proper patent, shall suffer from five to eight years of imprisonment, and a fine of from one to five hundred *pesos fuertes* ; and if, from his introduction, the healthy community should be contagioned, he shall forfeit his life." And who can say that the contagion which has manifested itself in that community might not be introduced by the medium of another person, or of effects ? I consider this a punishment excessively severe ; and, to justify its imposition, there ought to be a certainty that the contagion was introduced by the person coming from the empested population. If the punishment awarded to those leaving an empested population, and introducing themselves into a healthy one, be compared with that

which is imposed upon those taking unexpurgated goods from a lazaretto, it will be seen that they observe a very great disproportion ; since the first, even non-contagioned, suffers an imprisonment of from five to eight years ; whilst the second, under similar circumstances, undergoes the punishment of *ten* years' imprisonment, and a fine to the amount of the value of the goods. For the rest, and with respect to the measures of salubrity, I must say that they are not objects of this regulation, but a part of the municipal ordonnances of the Ayuntamientos and regulations of police ; and, for this reason, ought not, in my conception, to form a part of this Code. I am of opinion, then, that the Cortes ought not to admit this Project in its totality.

Señor Montesino (a physician, and one of the members of the Committee of Public Health of the Cortes).—With a view to impugn the project which is under discussion, the question has been raised, whether, in effect, there do or do not exist contagious diseases ; and one of the preceding speakers has stated, that in communities labouring under these maladies a general confusion prevails, arising from the terror inspired by this class of infirmities. I have, at the risk of my life, observed contagioned communities ; and I can say, that I have met with but one class of persons who are timorous.

In effect, I have always observed, that in general the neighbours of communities of this class hasten to their assistance, at least the greater part of the regular residents. But, waving that question, because I do not consider it necessary to the present discussion, I shall say that, in my conception, we ought to examine

whether the measures proposed, in this project, be or be not useful for the intended object. One of the points which have been impugned is, the establishment of Juntas of Sanidad; and certainly I am surprised to hear it said that these Juntas would embarrass the Government. I say that I am surprised; because I was one of the individuals of the Committee who refused to propose that part of the Report, and we did propose it only because the Government repeatedly said, that it was absolutely necessary to establish the Direction, or Consultative Junta; and now it announces that it is much embarrassed by the execution of this determination. Señor Romero has attacked the Report of the Committee, repeating the observations of several other Deputies; and that which he has most dwelt upon is one of the four parts of the Report which has given the greatest satisfaction to other Deputies; but even if it should appear that this part ought to be omitted, the Project, notwithstanding, ought to be approved in its totality.

The matter was declared to be sufficiently discussed; and paragraphs 2, 6, and 7, of Article 321 of the Constitution, and Article 323 being read, on the motion of Señor Oliver, it was decided, by 65 to 48 Deputies, being a majority of 17, that there was no ground to vote on the totality of the Project, and that it be sent back to the Committee.

SECTION (XXX.)

ANALYSIS OF THE PRECEDING DEBATE.

“ It was remarkable, that out of nine physicians, who were named by the Cortes, not one should have spoken or voted against the project ; and that under such circumstances it should have been rejected.”

IT is necessary to enter into some analysis of this debate : the result, I own, far surpassed even my most sanguine expectations. The progress of conviction was rapid perhaps beyond example. I had calculated that the code would pass by a majority somewhat larger than that by which it was rejected. To the actual issue, the prevalence of the influence of liberalism in the Cortes, indicated by the presidency of the enlightened Deputy of Catalonia, Señor Salvato, and the course taken by the Minister of the Interior, in the name of Government, might have somewhat contributed. But it will be more just, and doubtless more correct, to give the credit of this important event to the increasing intelligence, on this point, of the Deputies generally. The decision is the more to be applauded, as it was *in direct opposition to the declared opinions of all the Medical Members of the Cortes, amounting to nine.* Six orators spoke against the project, viz. Señor Isturiz, the Minister of the Interior, Señores Alvarez, Valdes, Casas, and Romero. The reasoning of these speakers is good and proper as far as it goes : but they have all, with the exception of Señor Alvarez, omitted to take

the only efficient and conclusive line of argument in this case. The question was not as to the qualities of the dispositions of the present project; because there is a preliminary question which ought to have been first discussed, and which is indeed the real one at issue, viz. whether pestilential contagion does, or does not exist; since, in case of a decision that there is no proof of pestilential contagion, there could be no ground for establishing *any* code of sanitary laws, nor for further discussion of the subject; whilst, in the case of the opposite decision, the question then would be, whether *any* code of sanitary laws be beneficial and justifiable, *before* discussing the merits of the provisions of *any particular project*; for I had shown clearly in the different representations which I had addressed to the Cortes, that, if even pestilential contagion could be proved to exist, all codes of sanitary laws would, notwithstanding, be unjustifiable. Of the pernicious absurdity of establishing a code of sanitary laws, founded on the notion of the existence of pestilential contagion, previous to any inquiry into the validity of that doctrine, or rather after it had been disproved, the irrationality had been fully displayed in my "Protest." I had enabled those Deputies who wished to impugn the project, to reject it upon the best possible ground, by establishing—upon demonstration as convincing, upon evidence as valid, as ever was adduced in any department of science—the non-existence of pestilential contagion. Why did they not do so? They might not all indeed have had an opportunity of perusing my larger work, it not having been translated into Spanish, and there being but one copy of it, in the original, in the hands of the Committee.

But my "Exposition" printed in Castilian, of which each member had been furnished with a copy, afforded ample and even super-abundant proof of this position. Had they not, besides, the Barcelona Manifesto of fifteen Physicians, which, as to the fever in that city in 1821, is quite conclusive? All their speeches, indeed, bear marks of their having perused these documents; but either of their not having perused them to the fullest advantage, or of their not daring to act up to the extent of their conviction or knowledge. And whilst the Deputies who opposed the project took a false position, its supporters did nothing but reiterate some of the antiquated assertions, which they call facts, that had been repeatedly refuted in the works upon their table; for the five Deputies who took part in favour of the project were all members of the Committee of Public Health,—in fact its parents, and *four* of them physicians. Their names are Pedralves, Seoane, Trujillo, Lopez del Bano, and Montezino, all, with the exception of Lopez del Bano, physicians. Dr. Lagasca, professor of Botany, was also a member of the Committee; and, although he did not speak upon this occasion, he no doubt, being a contagionist, decided in favour of the project. The remaining members of the Committee were, the President of the Cortes, Salvato; Pumarejo, the Spartan Deputy, who upon his election travelled on foot from Corunna to Madrid, giving his allowances for travelling to charitable purposes; and Nicasio Tomas, Ecclesiastical Vicar of Madrid. Salvato, whom I had the pleasure of knowing both at Barcelona and Madrid, appeared to me to have been convinced of the non-existence of pestilential contagion. The opinions of the two last members

on this point, are unknown to me. The result was, the rejection of the project *in toto* ; and the sending it back to the Committee, from whose shelves, had the Constitution survived, it would probably never return into the Hall of the Cortes in any shape or form.

The debate was commenced by Señor Isturiz, of Cadiz, a Deputy whose opinion, from situation, character, principles, and the place he represented, had great weight with the Cortes in all matters, and more especially on the point here under discussion. He begins wrongly by admitting, "that it is not known to a certainty whether the maladies which are the objects of the sanitary code be contagious or not." It may not indeed be known to the multitude. But to a man of sound mind, and of logical knowledge, who has attentively perused my various representations to the Cortes, it cannot be unknown. If there were no other proof of the non-existence of pestilential contagion than the absence of all proof of its existence, it would, with philosophers and men of science, be quite conclusive. But, besides this valid, and of itself sufficient ground of conclusion, the great variety of every species of proof, positive, negative, analogical, circumstantial, and *ad absurdum*, which I have adduced, is such as can only be resisted by those who are predetermined not to be convinced. In point of fact, then, Señor Isturiz was conceding by far too much. The non-existence of pestilential contagion was irrefragably demonstrated ; and the project of the sanitary code ought to have been rejected upon the ground of this demonstration solely, not of its particular demerits. Politically, however, and considering the various expe-

dients which it might have been at that time necessary to consult, the course which he adopted might possibly have been better calculated to procure the rejection of the code, on the ground of its particular demerits, than a more direct attack upon the doctrine of pestilential contagion. But, for my part, without pretending to be a judge of the expediciencies that might have existed, I would, as a matter of taste, have preferred risking the temporary acceptance of a code, of which the absurdity and severity would soon have operated its destruction, to compromising, even in appearance, the principle, for a single moment. In other respects, the observations of Señor Isturiz are full of wisdom and of force. He properly characterizes the dispositions of the project as impracticable, useless, oppressive, enormously expensive, and excessively severe ; calculated to produce discontent and mischief, but not one positive good.

Sr. Pedralves, the father of the project, whose hope of fame at least, and these not light if we may credit the concluding words of its introduction*, rested entirely upon its success, undertook to reply. He clerically divides his subject into five heads. His discourse bears internal evidence, that as much pains have been taken by the *Universal* (now defunct, as will shortly be the doctrine of pestilential contagion) to do more than justice to it, as have been employed

* La gloria de tamaña impresa estaba reservada a las actuales Cortes Españoles : y su venturosa consecution-hara la felicidad, y empeñará toda la gratitud de los siglos venideros. PROJ. DE COD. SAN. Intr. p. iii.—What prospects of glory, felicity, and gratitude, blasted by the discussion of one day !

to do less than justice to that of his opponents. It bears the true characteristics of a contagionist discourse, in inaccuracy of language, confusion of ideas, assumptions instead of proofs, and, instead of facts, assertions palpably false by the evidence of history. With respect to inaccuracy of language, Dr. Pedralves is a faithful disciple of the London College; for he invariably uses "contagion" simply for *pestilential* contagion, which, if the omitting to make the distinction be *by design* argues the most contemptible meanness; *if by mistake*, the most criminal ignorance of a subject of the highest importance to mankind, which he had undertaken to elucidate. By way of explaining the nature of contagion, he enters into absurd, irrelevant, and unintelligible definitions of endemic and epidemic diseases, which, if they had been both obvious and correct, would have been nothing to the purpose. His object appears to have been, as he could not produce any light of his own, to raise a cloud of words and sentences without meaning, which should obscure the light of his opponents. This is a case by no means peculiar to the Reporter of the Spanish Committee; it is common to the pestilential contagionists all over the world, who, since they will not renounce their error, have no other alternative.

Now for his "exquisite proofs" of the *existence* of contagion. "The question," he says, "whether there be or be not contagion (the expression ought to have been *pestilential* contagion) is the *most interesting*." It is the *sole* question; yet it is not formally discussed; he alludes to its being now agitated. I say the doctrine is not in doubt; but the existence of pestilential contagion is, by every form of proof, demon-

strated to be a chimera. Whilst it is certain, that no disease which depends upon a specific *virus* or contagion, is capable of being produced by any other cause ; Dr. Pedralves considers it a strong reason for believing any disease to be contagious, that its development requires the operation of other causes ! Thus, for instance, it is with him “ a very strong reason ” for believing yellow fever to be contagious, that “ the dispositions under which its development takes place in any country, are humidity, absence of ventilation, and want.” If these be necessary to the development of yellow fever, they must of course be its causes. From the profundity of Señor Pedralves, so much beyond all ordinary conception, one might be almost tempted to believe that he had studied his medical logic under Sir Gilbert Blane. By the by, Sir Gilbert, at the period I am writing, as if it were in anticipation, has got up another narrative respecting vessels of war on the Coast of Africa, and at the Island of Ascension, *in further proof* of the doctrine of pestilential contagion, as applied to *yellow fever**. Sir Gilbert, with some address, lays all his scenes at sea ; where he may suppose the difficulty of detecting inaccuracies may favour the success of his appeal ; but pestilential contagion having been universally disproved, it can by no means be necessary to refute particular alleged cases. Besides, when I recollect that, without being productive of any utility as to the general question, it cost that renowned lover of brevity, Dr. Bancroft, nearly one hundred octavo pages to dis-

* London Medical Repository for February 1824.

prove the importation of the *virus* of a single epidemic, the noted Bulam pestilence, in a single vessel,—the ship *Hankey*, from Africa to the West Indies,—I am not much encouraged to undertake the task of disproving, even in epitome, the importation of the *virus* of all possible epidemics in all possible vessels. To such a work Viner's "Abridgment of the Laws of England" would be but a *feuilleton*. With respect to the contagion of *yellow fever* at Ascension, then, I leave our medical logician and his friend Dr. Bancroft to settle that matter; merely observing, that it was not very decorous in the First Physician to His Majesty officially to address to the Lords of the Admiralty a species of reasoning, which would not be highly complimentary to the understandings of even an assembly of superannuated dowagers.

But to return to the father of pestilential contagion in Spain. In one respect, Señor Pedralves is unquestionably profound; for by his fidelity to dame Contagion, he has secured to himself not only impunity, but probably promotion, under the despotic *regime*, and even the countenance of the holy Inquisition itself, should it be revived. Under such auspices, when retrogradation is the order of the day, he is certainly not unworthy of being at the head of the General Direction of Sanidad, or of a new "Direction de Estudios."

So much for inaccuracy of language, and confusion of ideas. The false assumptions, and the false historical facts, may properly be blended together; for the latter merges into the former. I shall take them indiscriminately in the order of their occurrence in his speech. The first is a false historical fact of some importance. "The yellow fever," he says, "was

not introduced into Spain until after the discovery of the New World," &c. Sir Gilbert Blane repeats the same story in his late letter to the Lords of the Admiralty concerning the reputed origin of a fever at Ascension. It is the usual resource of the pestilential contagionists, of which we shall presently see the value. In authenticity, it may rank with the evidence of Dr. Pym respecting His Majesty's ship *Theseus*; or the narrative of Dr. Furio respecting the death of the *Patron Coll*, as already related.

Answer 1. Campmany, in his *Memorias sobre las Antiquitas, Comercio &c. de la Barcelona*, Madrid 1792, vol. iii. S. 126, speaks of thirty-two epidemics at Barcelona from the year 1333, of which twenty-two happened anterior to the discovery of the New World. The periods of eight of these epidemics are as follows :

Year 1410, from August to the 29th of December.

— 1448, in October only.

— 1457, from May to November.

— 1494, from July to September.

— 1497, from July to October.

— 1515, from July to the 28th of October.

— 1560, from the 14th of June to November.

— 1589, from June to December.

Vol. iv. S. 86, and the following ones.

Answer 2. When ships from America arrive in Spain, no fever takes place, unless their arrival happens to correspond with the pestilential season; although, at the time of their sailing, an epidemic might have prevailed at the port of their departure. But this is regularly accounted for by the pestilential contagionists, by the *assumption*, that its non-occurrence

is prevented by the vigilance of the quarantine guardians ; or, when it does happen to occur, by the other convenient *assumption*, that it takes place in consequence of the sanitary regulations having been violated. I know not by what assumption they will account for the Sanitary Guardians being so very drowsy, or the smugglers of contagion so very vigilant, only at particular seasons. But these matters certainly do require some explanation. Upon similar hypothetical grounds, he considers the pestilences of Spain to have been *imported*. And this *assumption* he offers as “*proof* of their not having been generated in Spain, but brought from America, and introduced *when precautionary measures have not been adopted*.” Here we have assumption on assumption in successive strata ; and all these assumptions are confidently stated as facts in the face of all the ruinous consequences of the sanitary restrictions, adopted in 1821, at Barcelona, Tortosa, and Palma. With respect to the appearance of the disease in the interior, as at Cordova and La Carlotta, it is nothing to the purpose. Epidemic diseases are not, any more than contagious diseases, limited to the sea-shore, although they appear more frequently in those latter situations. But whether they appear by the sea-shore, or on the tops of mountains, it equally affords favourable assumptions to the pestilential contagionists : if in the former, it is a proof of their *importation* ; if in the latter, it is a proof of their *being propagated*. When the inhabitants of places that are usually *healthy* are empested, it is because sufficient precautions have not been taken, or because sanitary laws have been violated ; when those of places that are usually *unhealthy* are not empested,

it is because sanitary regulations have been duly observed. There is no difficulty which the system of pestilential contagion does not readily explain. In my various representations I have shown, what most of the speakers in this debate have confirmed, that sanitary restrictions never have been, and never can be, so strict as not to be capable of being eluded ; and, consequently, that if even contagion did exist, they would be at least useless. Señor Pedralves was therefore as wrong in assuming, that if pestilential contagion were proved to exist, it would necessarily follow that sanitary laws are useful and necessary, as in respect to all his other gratuitous assumptions. It has been shown in one of the preceding sections, that even in this case they would be both pernicious and unprincipled.

We now come to an historical *fact* relating to two English and two French frigates. The latter being captured, that part of the crew of the former which was sent to take charge of them, got sick, and many of them died. This is given as an instance of contagion, *because* it occurred at sea, and in an unconfined atmosphere. Considering this as a *bona fide* narrative, I should thus comment upon it: It does not appear that the English frigates were affected, or the inhabitants of Halifax, where five of those sailors who had manned the French frigates are said to have died of the disease. One boat's crew at least must have returned to the English frigates, after the French frigates had been manned ; and those who arrived at Halifax must have had some intercourse with the inhabitants after landing ; yet it does not appear that any disease was produced either in the English fri-

gates or at Halifax. And what became of the French prisoners? Did they remain for weeks on board of the English frigates, *without having propagated the contagion with which they were loaded?* But if the crews of all the frigates had been affected, would it have been an inevitable conclusion, that the English had been contagioned by the French crews? No more than it would have been a proof, if these crews had been all drenched in the same rain, or had all foundered in the same storm, that they had wetted one another, or drowned one another. Are not pestilential blasts to be met with at sea, as well as on shore? But independent of all this, the case as here related, had the narrative been correct, would be very easily explained. It would be quite clear, that if persons on board the French frigates only were empested, without the malady extending to the English frigates, or to the shore, which we should be entitled to conclude was the case, from the silence of the narrative on those points, it would have been incumbent on us to conclude that the malady had depended upon local causes peculiar to the condition of the French ships. But it would not by any means follow, if this narrative could be proved to be correct, and if we should be unable to explain it upon the principle of atmospheric infection, that it would be incumbent on us to admit the principle of pestilential contagion. Most of these narratives, however, like those relating to the ship *Theseus*, and to the *Patron Coll*, are mere fables, with which the veracity of the narrator, as he may readily have been imposed upon, and the marvellous is in such request on this subject, may have nothing to do: and no man can reasonably take it amiss, that his

own conception of a transaction, taken upon trust, should not be received, in opposition to the most obvious laws of nature. And what will the reader say, when he finds that this narrative has scarcely any more foundation in fact than the other two to which I have just alluded ; although so confidently detailed as truth by Señor Pedralves to an audience who were not likely to detect the error ? He cites no authority. Having, however, an obscure recollection that I had met with a story something similar in its outlines in the writings of Sir Gilbert Blane, and knowing that the Baronet was good at pestilential sea-pieces, I had the curiosity to refer to that curious repository of evidence, his “Elements of Medical Logic,” where indeed I found a confused narrative respecting *one French ship taken in battle*, but whether ship-of-the-line, frigate, or merchantman, is not stated : “On the coast of America, in May 1795, on board of which this fever *or* its infection (contagion) was found, and was communicated to the seamen of the *British* ship *Hussar* (what kind of a ship was she ? surely if she had been a man-of-war, Sir Gilbert would have said ‘His Majesty’s ship’), by the men in health who were shifted into her from the prize.” If this be the same story, Dr. Pedralves multiplies the ships by two, and converts them into frigates. In the number of men he adheres to his original : “Of fourteen men sent from the *Hussar* to navigate the prize, nine died before reaching Halifax, a passage of twelve days : the other five were sent to the hospital, where *some* of them *probably* died.” (p.160.) Señor Pedralves makes them all die without any hesitation or doubt. But his palpable misrepresentations are quite as good evidence, *in foro*

scientiæ, as Sir Gilbert Blane's original assertions, whilst he can bring no proof of the existence *any where* of the pestilential contagion of which he talks. All such tales are in fact utterly unworthy of notice ; and these specimens must from me for ever suffice. The *Theseus*, the *Patron Coll*, and the *Hussar*, will in future always be my reply, when any of those monstrous absurdities are urged as evidence. And if any reader should be dissatisfied with this my determination, I will by no means agree to indulge his unreasonable wishes so far as to waste as much powder and shot on any single ship or vessel, however deeply laden with pestilential contagion, as Dr. Bancroft expended on the ship *Hankey*. But to return to Sir Gilbert Blane, and his "Elements of Medical Logic."—"Elements of Medical Rhetoric" would have fitted the contents as well, and "Elements of Medical Mystification" better. This curious production, which was published in 1819, when a parliamentary inquiry was about to commence into the validity of the doctrine of contagion in the plague, appears to have been got up for a purpose, and consists principally of a declamatory defence of the doctrine of pestilential contagion, and a masked attack upon my "Researches in the Levant concerning the Plague." Avowedly without any knowledge of their contents, and professing to have only been "told" of their existence (and I would not commit the indecorum of accusing him of having taken a sly peep) ; this eminent medical logician and pestilential contagionist, with all the authority that belongs to the First Physician of His Majesty, unmercifully falls foul of my two unlucky volumes on epidemic diseases, which he magnifies into quartos, assail-

ing them and myself with similes, metaphors, apostrophes, interrogatories, innuendos, and accusations, with every thing, in short, but syllogisms ; I beg pardon, he *has* favoured us with one syllogism, of so remarkable a kind as to deserve the precedence of all his other labours. “ A work,” says he, “ has recently been published in London, to show that the plague does not depend upon contagion : a work has recently been published in Strasburg, to show that the venereal disease does not depend upon contagion ;” the latter conclusion is too evidently absurd to deserve an answer ; *ergo* the former conclusion is too extravagant to require a refutation. Q.E.D. After designating plague “ the *hurricane* of the human frame,” and depicting this “ *hurricane*” as *chained by sanitary laws*, the author with becoming gravity proceeds, “ Is it to be endured, that, *by a piece of cavilling sophistry, a monster shall be unchained*, which in the course of a few years has devoured more than half a million of human victims ?” The natural conclusion was, that a monster, which could perform such prodigies when chained, would, if unchained, devour the whole of mankind at a meal ! It is not therefore surprising that our horror-stricken logician should go on mystically to arraign the nameless author of this sophistical and mischievous work, in terms such as these : “ But if *any one* should persist in the following declaration,” &c.—“ the rational answer would be” (it is condescending to give a *rational* answer to an *irrational* declaration), “ Be it so ; but are *you*, in order to indulge yourself in this miserable play of words, to sport with the lives of thousands of your fellow creatures ?” Again : “ It will hardly be be-

lieved, that *in this age* there are *persons pretending* to medical education and science, who actually argue, on no better principles, that the plague *itself* is not contagious." (p. 179.) For the sake of humanity, it is to be regretted, that the First Physician of His Majesty did not descend to refute the dangerous sophisms of this evil-minded writer, who, *in order to indulge himself in a miserable play of words*, would unchain a monster to devour the world, himself included. To our logician's imagination, yellow fever appeared to be somewhat less terrific. "We have endeavoured," says he, "to find some excuse for *the like error*, with regard to yellow fever; but neither will the experience and common sense of mankind here surrender themselves to any *profusion of bewildering words, however confidently and imposingly pronounced*, and spread through *some thousands of pages*." (p. 180.) To the general reader this criticism upon trust will probably be specimen sufficient of the "*Elements of Medical Logic*," which it has not until now fallen in my way to notice. If it were not as venial to be in error respecting plague, as yellow fever, it might be unfortunate for the framers of our quarantine laws, among whom our critic takes a distinguished rank.*

Thus we find the pestilential contagionists of different countries impelled by similar necessities to have recourse to similar subterfuges, sympathetically crediting each other's wildest assertions, and circulating them as facts. Señor Pedralves quotes as authority

* Sir Gilbert was a member of the Committee of 1800, as stated in Section I.

Gilbert Blane's case of English and French ships, duly magnified, and will doubtless hereafter quote his recent account of the yellow fever, which prevailed on the coast of Africa, at the Island of Ascension, and in some of His Majesty's cruisers in the adjacent seas ; whilst Sir Gilbert, unless in the mean time Othello's occupation should be gone, may be expected, in his turn, to avail himself of the romances of Señor Pedralves and other academicians, concerning the *contagious propagation* of the fever of Barcelona in 1821. If we are to have recourse to tales, we had better at once take as authorities those of Boccacio, respecting a pestilence at Florence, and the popular tales of Miss Edgeworth, in which she represents *Turks as performing quarantine to avoid the Levantine plague*. They will be found infinitely more amusing, as well as less inconsistent, than the grave and laboured narratives of our medical professors, without being at all less veracious.

The historical fable of the non-occurrence of yellow fever in Spain, antecedent to the discovery of the New World, is an error of superior importance. It displays an ignorance highly criminal, on the part of persons pretending to give instruction to the world ; although, as a mere suppression of the truth, it is not quite so audacious as the invention of the pretended historical fact, that the ancients believed in, or were acquainted with, the doctrine of pestilential contagion.

In Barcelona, Dr. Pedralves says, many persons remained exempt from the disorder, *by having no intercourse with the sick*. How does this appear He here first assumes non-intercourse ; and next assumes,

that exemption was a consequence of this non-intercourse. If this position had been correct, it would have necessarily followed, that those who had been in free communication with the sick in the upper parts of Barcelona, and in Gracia, Sarria, and the other adjacent villages, could not have escaped being empested. But no person in these villages, who had not been in Barcelona, sickened even from among those who attended the empested.

The allegations respecting women and children are directly contrary to the facts on that subject, recorded in the History of Epidemics. Children are much less liable to these diseases than grown persons, among other obvious causes, from the absence of fear.

The orator next endeavours, with parental solicitude, to justify the severity of the penal part of the project, by referring to his own humanity, and *assuming* the necessity of the case; i. e. assuming that if the violators of sanitary laws were not put to death, the whole world would be empested! But I had shown in my Exposition, which, being printed in Castilian, and in the possession of every member of the Committee, Señor Pedralves might have studied to better purpose, that even had pestilential contagion been as clearly proved to exist, as it has been proved not to exist, sanitary laws would notwithstanding be unjustifiable.

He concludes by exhorting the Cortes to adopt the project on account of the "sacred end" which it has in view; being "no other than to *procure for Spaniards the highest health, and for Spain the highest salubrity.*" There is something supremely absurd in the very idea of seeking such ends by legislative enact-

ments, as I have fully explained in my criticism upon the project, being my fourth and last representation to the Cortes, contained in Section XXVIII.

The Minister of the Interior opposes the project, which I regard as one of the most curious features of this debate. He desires to retain pestilential contagion and sanitary laws ; but not in the hands of a General Direction. In his ideas of the laws of evidence, he is a faithful disciple of the London College of Physicians. He is decidedly of opinion that pestilential contagion should be deemed to exist, until its non-existence be proved in an incontrovertible manner. But I fear it will be difficult to meet this Minister's expectations, since he does not appear to have considered it a sufficient proof of the negative, to have demonstrated the impossibility of the affirmative, as I conceive has been amply accomplished. He however appears to be so far a disciple of mine, as to think that the power proposed by this project to be vested in a General Direction is excessive ; but he believes, at the same time, that it would be very advantageous if it were vested in Government. He very properly disapproves of Juntas of Sanidad, as permanent bodies. All the duties, he thinks, could be very well executed in his own department. This speech gives rather an amusing view of a contest for power, between a band of Physicians and a Government, to the total disregard of the interests of the Nation. The result was however beneficial, and doubtless contributed to increase the majority on the side of truth and reason. The Minister, it is true, deprecates the expense and the severity of the penal part of the project ; but his objections throughout are mainly

directed against the encroachments of the General Direction upon the authority of the Crown.

Señor Pedralves, in reply, denies that the General Direction would interfere with the functions of Government; and asserts that, far from being a burden to the State, it would in time become a *source of revenue*. This is certainly a new, and might be made a fertile source of taxation! He observes that the project of the Commissioners of Government had *nine* Directors General; and that in the *enlightened* nation of France it was proposed to have *fifteen*; whereas his project has moderated its demands to *three*. I do not clearly perceive in what manner it would benefit a nation, that an execrable system should be intrusted to the management of three persons, rather than nine or fifteen. *Señor Pedralves*, in his former speech, compared pestilential contagion to a seed; in this it has grown to the size of a bird; and if this bird should prove a goose, there may be some chance of catching it.

Señor Alvarez. The short speech of this Deputy is entirely to the purpose, and shows that he had perused the Barcelona Manifesto, and the various representations which I had the honour of addressing to the Cortes, with the care and attention due to so important a subject. He insists upon the propriety of first discussing whether pestilential contagion does or does not exist.

Señor Seoane, as a member of the Committee, enters into explanations respecting various points of the project. He is himself inclined to think that pestilential contagion does not exist. He nevertheless, not very consistently, agrees with the rest of

the Committee, that regulations to obviate its effects should be adopted. They have however abandoned isolation or seclusion, as formerly practised, and have proposed that the sick should be sent into the country. What is this, in effect, but to abandon contagion? and would it not have been much better to allow the sick to choose an asylum for themselves? Dr. S. says, that in the Committee there are horrid documents, showing the despotism that has been committed under these laws. It is to be regretted that some of them should not have been published. He admits that these regulations are as ineffectual as the laws to prevent smuggling in Spain; yet he recommends the adoption of the project. These are seeming inconsistencies, which perhaps my friend Dr. Seoane will be able to reconcile upon grounds of temporary policy or expediency. But at present they appear to me, I confess, difficult of reconciliation. He is entirely mistaken in supposing the question of the existence of pestilential contagion not to be decided in effect, if not officially and in form.

Señor Valdes (Don Cayetano) considers the project *worse than contagion*, and upon various satisfactory grounds votes for its rejection; but especially because, for money, its provisions may be, and are almost continually, evaded. He had himself performed sixteen quarantines, and had been invited to transgress the sanitary regulations by the very persons who were appointed his guards. On this point what I have related of the cordon of Barcelona, and of Mr. C—y, are much to the purpose.

Señor Trujillo makes the apology of the project, alleging that, among the Faculty, the majority of

voices is in favour of the existence of (pestilential) contagion, and quoting the example of other nations in favour of sanitary codes. But these would be very inefficient reasons, even if they were wholly true; and they are besides in a great degree incorrect. In the United States of America, for instance, although sanitary laws are not yet wholly abandoned, the proportion of physicians in favour of the doctrine of non-contagion, in respect to yellow fever, is as ten to one. And there are many parts of the world, perhaps the greatest proportion of it, where those ideas are not at all entertained; as India; many parts of the West Indies; China; Persia; and the Ottoman dominions.

Señor Casas considers sanitary precautions "greater evils than the pestilences" they are intended to obviate. He regards pestilential contagion as a prejudice; and recollects when the dread of contagion, in phthisical cases, was so great in Spain, that it was believed, a person, by approaching the house of a consumptive patient, was liable to be contagioned. In passing through Valencia, in 1821, I had a strong confirmation of this belief still existing in Spain. A young gentleman of Guernsey, residing in the house of Mr. Henry O'Shee of that town, was in the last stage of pulmonary consumption. I was asked to prescribe for him, which I did, informing Mr. O'Shee, that, in my opinion, he could not survive above a month, or at the furthest six weeks. The family informed me, on this occasion, of the strength of the prejudice maintained even at this day at Valencia, and of the great trouble it would occasion them in purifications, lustrations, whitewashings, &c., after his death, if the nature

of the disease under which their inmate was labouring should become generally known. "Although all these (epidemic) diseases should be really contagious," Sr. Casas "should deem the regulations proposed to be useless and even prejudicial." In his opinion, "*the most terrible phænomena, and the most cruel symptoms of the epidemic diseases reputed contagious, are Juntas of Sanidad and sanitary regulations.*" And he speaks from experience in empested communities. The whole of the excellent speech of this Deputy is well worthy of the most attentive perusal. He of course opposes the project.

Señor Lopez del Bano, another official defender of the project, follows the ambiguous phraseology of the London College of Physicians, substituting "contagion" simply for *pestilential*-contagion, occasioning endless confusion, and a wide difference in the reasoning and conclusions. He is for *exterminating the disease in its focus*, catching the unfledged bird in its nest! He considers "the propositions of the Committee applicable, *even in case of negativing the contagion of endemic infirmities!*"

Señor Romero impugns the dispositions of the project in detail, but more especially those which regard lazarettoes and the police of vessels. He considers the penal part of the code excessively severe; and exposes the absurdity and disproportion of its punishments. The whole of this speech is well worthy of attentive perusal.

Señor Montesino, a professional and official defender of the code, adheres to the misleading phraseology of "contagion" simply.

It is to be observed, that all the advocates of the

code have resisted or eluded the real question at issue, viz. whether *pestilential* contagion does, or does not exist; and that its opponents have unaccountably, with the exception of *Sr. Alvarez*, abstained from pressing this point as an indispensable preliminary. It was remarkable that out of nine physicians, who were members of the Cortes, not one should have spoken or voted against the project; and that under such circumstances it should have been rejected. The speeches of the Medical Deputies, it may be remarked, are notoriously more obscure or unintelligible than those of their non-professional colleagues, in proportion as their greater scholastic prejudices, upon this subject, had remained proof against ejection by the force of reason. But this debate, as constituting the first formal discussion of the merits of sanitary laws, which has ever taken place in any legislative assembly, may be regarded, upon the whole, as most important and interesting, and as having, in various ways, conferred essential benefits upon mankind: and as my representations alone contained those facts and arguments, which, upon general principles, could justify the decision formed upon this occasion (for the Barcelona Manifesto could only apply to the individual fever of that city in 1821; and there were no other representations that were at all applicable), to these sources it is evident that this rejection by the Cortes of the project of their Committee of Public Health ought wholly to be attributed.

SECTION XXXI.

REMARKS ON OFFICIAL DOCUMENTS FROM CERTAIN
QUARANTINE STATIONS IN THE MEDITERRANEAN,
AND ON A SPECIFIC CHARGE PREFERRED AGAINST
THE AUTHOR BY MR. TULLY IN HIS WORK UPON
THE PLAGUE; ALSO ON THE CRITICISMS OF DR.
PARIS AND MR. FONBLANQUE.

“Were it not to satisfy the minds of the simpler sort of men, these nice curiosities are not worthy the labour we bestow to answer them.”—HOOKER.

“With home-born lies, or tales from foreign lands.”—POPE.

A WORK was published in 1821, entitled “The History of the Plague, as it has lately appeared in the Islands of Malta, Gozo, Corfu, Cephalonia, &c.” by J. D. Tully, Esq. Surgeon to the Forces, Member of the Ionian Academy, late Inspector of Quarantine, and President of the Board of Health of the Ionian Islands. This work appears to have been intended to counteract the impressions, which it was found had been made by my publications and evidence against the doctrine of pestilential contagion and the system of sanitary laws; and I have learnt that much importance, with that view, has been attached to the official documents which it contains from the quarantine stations in the Mediterranean. In addition to the authority of the writer, himself an Inspector of Qua-

rantine and President of a Board of Health, we have here that of the Governments of Malta and the Ionian Islands, of the Director General of the Army Medical Department at home, and of the principal Quarantine Officers of Malta and Zante, combined. A direct attack so supported, however I might disregard it personally, I do not think myself at liberty, in reference to the inquiry, wholly to overlook. In that publication, all the objections against my principles which could be collected together, by persons the most conversant with the operation of the system which it is my purpose to overturn, are to be found concentrated as in a focus, affording me a singularly favourable opportunity of fully and fairly meeting them. That the work is written with temper, ability, and fairness, I willingly admit; and I am not disposed to question the purity of the author's motives, or the sincerity of his belief; but only to controvert the truth of his premises, and the justness of his conclusions.

Mr. Tully (Pref. p. vi.) thus professes his motive: "In exhibiting the fallacy of those *very extraordinary* doctrines which have been lately advanced on the subject of plague, he has been actuated solely by a feeling of moral obligation to that public whom he has so long and so faithfully served." And a little further on he adds: "The transactions herein detailed, as having taken place in the Ionian Islands, have been founded upon the official Reports of the writer to His Majesty's Government, at the period of their occurrence, nearly five years since, *when he never imagined that the contagion of plague could be doubted.*"

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."

In support of the opinion that the materials of this work are a sort of pestilential contagion joint stock concern, I may quote the following observation of the author: "What has been here stated cannot, I persuade myself, fail materially to add to the catalogue of *facts* already adduced in support of *our* question; and they become the more interesting, as they are supported by numerous official documents now in the possession of the Director General of Army Hospitals, Sir James M'Gregor." (p. 249.) Here follows a splendid eulogium on the Inspector General, to which if I should be disposed to subscribe, it would not, I trust, bind me to an acquiescence in the infallibility of his "numerous official documents."

Without observing any methodical arrangement, I shall endeavour to show the fallacy of such of the allegations, contained in this pic-nic official or demi-official collection of documents and doctrines, as appear to be the least unworthy of notice; and the first article which I shall select for comment is a Report purporting to supply new proofs of the existence of pestilential contagion, from Malta, in the annunciation of which Mr. Tully, not satisfied with the weight of authority which he had already confederated against me, has contrived, rather unfairly as I think, to enlist Providence as a member of the league. "It would appear," says he, "that Providence had interposed at this particular crisis" (at the moment when the inquiry into the validity of the doctrine of contagion in the plague was proceeding in the House of Commons) "to evince in a most especial manner the specific contagion of plague." (p. 277, Supplement.) And how is this special interposition of Providence evinced?

By the arrival at Malta of the bombard *La Trinita*, Francesco Azopardi master, with the crew labouring under plague, the usual measures of precaution being taken, and the plague not spreading! This is the amount of two Reports of the Superintendant of Quarantine to the Government, dated the 9th of April and the 11th of May 1819, the last of which he thus concludes: "I have no hesitation in expressing my conviction, that this disease has been fortunately *extinguished* with the loss of only two individuals." (p. 283.) Amongst the measures of precaution adopted was the submersion of the poor bombard for ten days, and the *burning* of the *susceptible* articles which formed part of her cargo. Now, I have not the smallest doubt that my worthy friend Dr. Greaves, the Superintendant of Quarantine, sincerely believed that these measures were indispensable, and that they were the cause of preventing the disease from spreading; but what proof is there that, but for these measures, the disease would have spread? No more proof than there is that the monument on Fish-street Hill, or any other building erected about that period, is the cause of there having been no plague in London since the great fire, or quarantine establishments of there having been no plague in England since 1720. Besides, there being no where any proof of the existence of pestilential contagion, there is here positive proof of its non-existence. The master of the bombard, the health-guardian, and the attendants on the sick in the lazaretto, remained well! To account for this on the principle of pestilential contagion, we must have more assumptions of susceptibilities and non-susceptibilities; the existence of contagion, and the

prevention of its spreading by precautions, being themselves all assumption. The true explanation of this matter is, that the master lived better, worked less, and was less exposed to vicissitudes of temperature, particularly to the excessive heat of the sun, than the crew; and that the Health-guardian, and the attendants of the sick in the lazaretto, were not exposed to any causes of sickness whatsoever. The Report says, "Both Michael Lubrano and Fortunato Zabra are perfectly recovered, and are now performing their quarantine in the lazaretto, *together with their attendants who are free from all suspicion*. Captain Azopardi and the Guardian have been *separated from the sphere of contagion* for forty days, and are *now perfectly secure* performing their quarantine in the lazaretto." (p. 282.) Now, how the attendants on the two empested men in the lazaretto could have remained free from disease, if the disease of these men had been contagious; or how Captain Azopardi and the Health-guardian could have "steered clear" of disease, to use a nautical phrase, *before* they were removed from the sphere of the contagion, if that contagion had not been purely imaginary, I will leave the advocates of that wonderful doctrine to explain; for to me these facts appear upon such principles to be wholly inexplicable.

The crew of the bombard originally consisted of six persons, including the master. They left *Susa* on the 19th of March; one of the crew sickened the day before, and died on the 22nd with *petechiæ*. The other four sickened on the 1st, 3rd, 4th, and 5th of April; two died on the 5th and 8th after three and four days illness; two recovered; the master remained

well. It is quite obvious, from this analysis of the Report of the 11th of May, that no contagion existed in this disease ; and that consequently the causes of sickness must have been applied at *Suza* and on the voyage previous to arriving at Malta ; or if any part of the cause had been applied subsequently to arriving at Malta, as hard labour with exposure to the sun, contagion could still have had nothing to do with the production of the disease. It is then here, as in all other cases of pestilence, a perfectly gratuitous assumption, that, but for the formidable sanitary precautions that had been taken, the disease would have spread. On the contrary, if all the sick crew had been landed from the bombard, and placed in contact with the inhabitants of *La Valetta*, I feel as certain as that two and two make four, that not one would have been *contagioned*. Nervous persons indeed might have been frightened to death, or pregnant women into miscarriages. But pestilence would no more have been produced than it is produced in Turkey, by the landing of pestiferous persons ; a fact of which there are such frequent instances as to have rendered it a familiar phænomenon. When under the concurrence of a pestilential season, with the arrival of pestiferous persons, in any part of Turkey, plague happens epidemically to prevail, the presence of the pestiferous strangers has nothing whatever to do with the matter. Nay, if the officers of quarantine in the Mediterranean were to exert their utmost ingenuity in devising means for the propagation of pestilence by contagion, they would not prove successful in a single instance.

Notwithstanding that the non-occurrence of disease at Malta on this occasion, owing to there being no

pestilential atmosphere, was confidently attributed to the sanitary precautions that had been adopted ; had the season been pestilential, and the breaking out of an epidemic coincided with the arrival of this vessel, although the same sanitary precautions had been with equal rigour applied, the disease would with quite as much confidence have been attributed to some clandestine communication assumed to have taken place between this vessel and the shore.

At Zante, precisely at the same period, a similar God-send occurred ;—another “ interposition of Providence, to evince in a most especial manner the specific contagion of plague.” On the 18th of June 1819, the Ionian brig *St. Spiridione* arrived at Zante from Tunis, with a crew consisting of eight persons, master and supercargo included. A Health-guardian was immediately placed on board ; on the 23rd one of her crew ; on the 24th three ; on the 25th one ; on the 26th two ; and on the 27th the Health-guardian, sickened. Every one of the eight that sickened died : one only remained in health. The symptoms were unequivocally those of plague. They died at periods of two, three, four, five, six and seven days from that of attack ; a variety that never takes place in any disease known to depend upon a specific contagion. Dr. Thomas, President of the Board of Health at Zante, on whose authority the statement containing these particulars is given, (pp. 284, 285,) does not expressly affirm that this disease was occasioned by the opening of the trunks and packages of the crew ; but says that it happened “ *soon after*” this operation took place. The succession, however, in which the crew sickened, as well as the late period at which the Health-guardian

was attacked, being the 9th day after coming on board, although the packages, it is presumable, must have been opened on the first day, show that neither the opening of the packages, nor a specific contagion, which must have a more uniform operation, could have had any thing to do with the production of the disease. "The most humane means were resorted to by Government," says Dr. Thomas, "*for the safety of the unfortunate persons attacked with plague.*" (Yet every one of them perished!) "And the most decided measures were carried into effect, *for the purpose of preventing the possibility of the introduction of contagion into the island.* The consequence was, that this dreadful disease, *which committed such dire havoc amongst the limited few exposed to its influence, was confined to its original source.*" (p. 285.)

Here we have a perfect epitome of the absurd system of sanitary laws, and its destructive effects. Without proving of the smallest use as a preservative to the island, there being, in fact, no preservative wanted, "the most decided measures" that were resorted to, upon this occasion, had the undoubted effect of killing the people on board of this vessel, as certainly as they could have been shot dead by musket balls. The "dire havoc," then, was not the effect of disease as it would have proceeded under the application of its proper causes, but as aggravated by sanitary restrictions, creating terror, and occasioning a destitution of medical aid, common attendance, and even perhaps sustenance. The probability is, that, under ordinary circumstances, three-fourths, if not the whole, of the sick in this vessel might have been saved. But, as

it was, it would have been an act of kindness to have shot or thrown them into the sea. That the disease would have spread to the island, if the measures had not been adopted, which occasioned the death of the crew of the *St. Spiridione*, is, as usual, a mere gratuitous assumption. In other respects, the same arguments apply, but in a still stronger degree, to this case, that were employed in the case of the bombard *La Trinita* at Malta.

To follow this author regularly would be only to repeat explanations which I have already frequently and fully given. There are however some few points to which I shall cursorily advert. In common with some other partisans of pestilential contagion, who have done me the honour to criticise my doctrines, Mr. Tully has affected to consider me as only one of a community to whom a certain set of opinions, upon the subject of epidemic diseases, are proper ; a partnership which I desire most distinctly to disclaim. Whatever merit or demerit may be found to belong to the principles which I have here or elsewhere promulgated, I hold to be alike indivisible : and as no one will claim a share of the latter, it is my province to prevent any subdivision of the former. I therefore here protest against the egregious injustice of attempting to mix or to confound my doctrines with the opinions of other persons. At pages 8, 16, and other places, he wishes me to be considered as relying upon one argument, and as pushing that argument too far. He contends that the cessation of plague, where free intercourse prevails, is not less strong against the existence of a noxious atmosphere, than of contagion, as its cause. If this were true, it would be nothing to

the purpose. It would only follow, that we must search for some other efficient cause than atmospheric influence. The question at present simply is, Whether *contagion* be, or be not, the cause of pestilence. The negative is distinctly proved, not by *any one* fact or argument, but by *thousands*: and, if my reasoning in one instance should happen to militate against atmospheric influence being the cause of that disease, this would by no means save contagion. But that is not the case. The pestilential blast is not the sole, although it is generally the efficient cause. It is necessarily partial in its operation, as I have explained in other places; and its noxious, suddenly or gradually change into salubrious qualities; whilst the qualities of a specific contagion never vary. It will not, I presume, be asserted that catarrhs, influenzas, and other minor epidemics, are not atmospheric diseases, because they cease without having affected all the individuals of a community.

But the affirmation which we find at page 17, that “season has nothing whatever to do with plague,” although it would undoubtedly follow if the other allegations of the author were correct, will be considered still more extraordinary by those who have seen or heard of plague in Egypt, Asia Minor, and Syria, where it is as regular in the periods of its commencement and cessation as the rising and falling of the Nile. Out of the five plagues which are recorded as having afflicted Malta in the 16th, 17th, and 19th centuries, three, of which the dates are specified, happened at regular seasons, viz. those of 1592, 1675, and 1813. I have elsewhere stated the precise periods of several of the

epidemics of Barcelona from Campmany. Perhaps the plague of the Ionian Islands has shown less respect than others to seasons. If so, it must be, because the combination of causes has varied from the usual course. When poverty and want bear more than their usual proportion to the ordinary efficient cause, epidemics become more permanent, continuing not only through the four seasons of the year, but sometimes for several years consecutively. It appears indeed not improbable, from the author's own statements (p.), that the poverty of the inhabitants may have entered largely into the composition of the cause of pestilence in the Ionian Islands. Even in these cases, however, the greatest mortality for the most part happens at that period of the year corresponding with the usual epidemic season of the place. Upon the whole, no point has been more clearly elucidated, than the very great dependence of epidemic diseases upon the seasons. These matters will be more fully understood by the perusal of my observations on the epidemic of the Millbank Penitentiary in the next section. But let us suppose, for the sake of the argument, that plague occurs equally in every season ; how would this prove favourable to the doctrine of pestilential contagion ? It would only show that the cause of pestilence, instead of operating in some seasons more than in others, exercises an equal influence throughout the year. But it would not show that contagion forms the whole, or any part of that cause.

At page 246, the author asks : “ If plague did not depend upon a specific contagion, upon what principles are we to account for the extraordinary immunity

from disease of the numerous bodies of troops employed" (to form cordons, I presume,) at upwards of twenty different stations which he names? To this I might very properly reply, that I am neither bound to give this explanation, nor to admit pestilential contagion. It is singular, that the partisans of that doctrine should fancy themselves endowed with the privilege, upon every occasion, not only of assuming all their own premises, but of requiring explanations of their opponents, under the penalty of being obliged to admit their conclusions. I have however, in duty to the public, no objection to give this explanation, which, I am of opinion, can be done satisfactorily, even without being acquainted with all the circumstances under which the troops were placed at the two- or three- and-twenty stations mentioned, and even taking the fact of complete immunity for granted, although I think Mr. Tully acknowledges exceptions. Troops which are sent on the service of Cordons, are invariably prohibited from entering, and indeed have no inclination to enter, what is considered as the focus of a prevailing epidemic. On the contrary, they take their stations at as great a distance as their duty will allow beyond the walls, or on the eminences surrounding empested places. A single pace, a single inch, may be sufficient. Individual sentinels are only for a stated period on duty, and still beyond the precincts of the noxious atmosphere. Soldiers are better fed, better clothed, better lodged, and of stouter constitutions than the bulk of the empested communities, whose escape from disease and death they are, in fact, employed to prevent. They are generally in the prime of life, and are doubtless con-

stitutionally, as well as from being more habituated to danger, less subject to fear, than persons in private life. These circumstances would, in my opinion, form sufficient grounds of immunity, even were the barracks of the soldiers employed on the duties of cordons situated in the midst of the pestilential air, as I shall afterwards have an opportunity of more fully explaining. But they are rarely so situated; and their not sleeping in the pestilential air, would be alone a sufficient cause of immunity. My friend Mr. Joseph Ryan, a British Merchant at Barcelona, during the epidemic of 1821, slept at the village of Gracia; but came in daily to his business, his counting-house being in one of those streets close to the sea-wall, which suffered the most from the malady, without experiencing any inconvenience. I account for this immunity by his being a stout healthy man, in the prime of life, and free from fear, and by his not sleeping in the pestilential air of the lower part of Barcelona. The pestilential contagionists will explain it by their convenient doctrine of susceptibilities. Mr. Ryan they will not rank among the non-susceptible articles. The reader will take his choice of the explanations.

Upon the same occasion, both previous and subsequent to the intercourse between Barcelona and Barceloneta, the sentinels at the gate on that side suffered but in a very trifling degree from the disease, although they may be said to have been, whilst on duty, in the very focus of the epidemic. Among the numerous reliefs during the whole of that period, there happened but two or three casualties; yet this epidemic has been amply proved not to have depended upon a specific contagion. The sentinels at the Bar-

celoneta gate were supplied from the troops of the line quartered in the citadel, which, although low, being out of the direct course of the wind, wafting the noxious effluvia of the ditches and sewers south-east of Barcelona and Barceloneta, remained wholly exempt from the malady. Three or four individuals, indeed, sickened in the citadel, who had been exposed elsewhere; but the fever never became general in that quarter. It remained as free as the neighbouring villages. It is to be recollected that each sentinel of course remained only two hours upon duty at a time; and that his turn of duty recurred but at distant intervals; constituting an exposure much too short to produce disease by noxious air, but more than sufficiently long to produce it a hundred times over by means of a specific contagion. The Barcelona Volunteers, who so creditably performed the service of the city during the epidemic, in consequence chiefly of sleeping at their own houses respectively, suffered, according to the quarter of the city in which they happened to reside, in a much greater degree than the regulars, although not nearly in so great a degree as the inhabitants at large of that part of the city which was empested. It is painful to be obliged to have recourse to such minuteness of detail—such *arguta sedulitas*; but it is necessary in order not to leave the partisans of pestilential contagion “a single peg to hang a doubt on.”

We now come to the best commentary perhaps upon record, on the perniciousness as well as absurdity of sanitary laws, in the case of the unfortunate inhabitants of *Casal Curmi*, in the island of *Malta*, in the year 1813; of which I do not recollect to have

heard any particular mention, previous to perusing the work of Mr. Tully, it having probably been regarded, when I visited Malta, too exquisite a treat to be presented to a non-contagionist. It seems to be one of the greatest and most unaccountable delusions incidental to the singular system of which it is my lot to treat, that whilst an epidemic proceeds with increasing, and even more than ordinary severity, much beyond the usual period of the termination of epidemics at the same place, its cessation, when at length it does happen from a change of season, should with pertinacity be attributed to the very measures which had been the chief cause of its aggravation and prolongation. A very edifying history of the progress of the plague of Malta, in 1813, copiously intermixed with opinion and belief, will be found in the second chapter of Mr. Tully's work, describing, with mathematical precision, how that pestilence was "*clandestinely* disseminating itself," "*lurking in every corner of the island,*" and "*bidding defiance to every previous exertion,*" *when on a sudden that arm was raised, which, under Providence, was destined to crush the desolating foe.*" (p. 57.) It may be a singular taste, but, I own, I have been sometimes as much amused by the perusal of veracious histories of the adventures of unknown contagions, as by that of the Arabian Nights' Entertainments, or the novels of the Great Unknown himself. The adventures of the Bulam fever, by Dr. Pym, is an exquisite specimen of this kind. But let us hasten to the manner of *extinguishing* this arch enemy of mankind, as practised in Malta: "Nor was the conquest an easy one, Casal Cnrmi boldly contesting, inch by inch, every

effort that was made for the destruction of the disease." (p. 57.) "The arrival of His Excellency Sir Thomas Maitland, in the capacity of Governor of Malta, which took place on the 5th of October 1813, formed, *as we learn from the events that speedily followed*, and as we have just noticed, a particular era in the history of the plague of Malta; for we find (and it must be noticed with feelings of *gratitude* as well as *admiration*) that the progress of the disease was *every where arrested by the decided and energetic system adopted by His Excellency*." (p. 58.) It can scarcely be necessary to say, that in what I may have occasion to remark here respecting the conduct of the late Governor of Malta, I shall consider him as merely the dupe of a prevailing system, as interpreted to him by medical authorities, and by no means as erring from design. He doubtless considered it incumbent on him vigorously to enforce the measures, which he was informed were the best calculated for obtaining the end in view; and he could not be supposed to have been aware that those vigorous measures, upon which so much praise is bestowed, however much they were calculated to aggravate the evils which they were intended to remedy, could have had no more to do with arresting the progress of the disease, than the prowess of the fly upon the chariot axle-tree, in raising the dust, by which it was in danger of being suffocated. As investigators of the truth, we must not suffer matters which have no connection with each other to be thus confounded; we must not suffer the effects of the change of season, which was coincident with the arrival of Sir Thomas Maitland at Malta, to be attributed to the measures which he

caused to be adopted; whilst the real tendency of these measures can be shown to be of a diametrically opposite nature. October is the latest period of the ordinary epidemic season at Malta; and the prolongation of the disease beyond that period, or even to that period, in such severity, was chiefly owing to the unfortunate measures that were pursued. On this occasion, as is the usual course of epidemics, the disease continued longer (having perhaps commenced later) in one unfortunate village, called *Casal Curmi*, than the other parts of the island. It was imagined that the reason why the disease did not yield, was, that the precautions adopted were not sufficiently vigorous; and they were redoubled. The immediate results of this increased activity and rigour were exceedingly curious. It was discovered that "disease was *fostered* and *kept alive* from the hourly intercourse with *infected* goods on the part of many of the *misguided* inhabitants!" (p. 58, 59.) We are not informed by what experiments or processes, besides the usual process of assumption, this discovery of the concealment of goods, and of the concealed goods being contagioned, was made. Such, however, was the foundation of the measures which I am going to relate. "The knowledge of the above circumstances (surmises) compelled His Excellency to have recourse to the novel and extraordinary plan of *converting a populous country town into a species of lazaretto, shutting the inhabitants within their own precincts, by the erection of double walls, and by the establishment without these walls of cordon over cordon.*" (p. 59.) As might reasonably have been expected by persons not wholly blinded by the absurd superstition of pes-

tilential contagion, the effect of this vigorous blockade, which, in correctness of circumvallation, Mr. Tully seems to think surpasses the feats of any of the greatest captains of ancient Greece, was, that the epidemic, being duly provisioned by the season, and laughing at cordons, held out in full vigour until the month of December, and did not wholly capitulate until March, provisions and the garrison being both almost expended. On the 4th of December, a proclamation was issued against the Curmians, who would thus obstinately maintain themselves in an empested state, declaring that the law, as it stood, had been found inadequate to prevent the stealing of *infected* (contagioned) goods, and the secreting of *infected* (contagioned) articles, and enacting, 1. "That all that part of Casal Curmi, within the cordon of troops, in as far as relates to the plague, be *put out of the King's peace*, and be henceforth *declared to be under martial law*." 2. "That a Military Commission be appointed to carry into effect the said martial law, as far as relates to any case of the plague within the said district!" (p.287. Appendix.) By a third article three Commissioners are named.

To have obtained proofs, which could be considered valid by the civil law, of goods being "infected" (contagioned), would have been something miraculous: and, whether proof was or was not given, that proved satisfactory under the forms of martial law, it does not appear that this measure had any better success in putting an end to the disease: for in January (p.64), and even till the beginning of March (p.70), it had not finally ceased at Casal Curmi. There could not have been a more striking proof than this case

affords of the pernicious consequences of sanitary laws. Compelling the inhabitants of Curmi to remain exposed to the cause of the disease, not only prevented its cessation whilst the atmosphere remained in any degree pestilential; but absolutely consigned them to certain death. (It is not stated how many perished or how many survived.) When the qualities of the atmosphere ameliorated to a certain degree, the sanitary restrictions could not render the pestilence permanent; and therefore the disease ceased. But to say that it ceased in consequence of these restrictions in *March*, when they could produce no diminution of it in *September, October, or November*, is an insult on the meanest understanding. Sanitary laws do not even *seem* to produce any effect in limiting an epidemic at the commencement, the middle, or any period of its progress. It is only at its natural termination, when, in the course of the usual epidemic season, the atmosphere ceases to be pestilential, that the effect of this change is confounded with the supposed effect of the operation of the sanitary laws. Hence the labours of Lieutenant-General Oakes, at the commencement and during the progress of the malady, although praised as meritorious, are stated to have been unavailing: sanitary laws could do nothing in an atmosphere really pestilential, but to augment its injurious effects. But, on the arrival of General Maitland, at the termination of the pestilential season, sanitary laws did wonders, and the fever ceased in all places where the qualities of the atmosphere had already ceased to be noxious; but at Curmi, where it happened that these noxious qualities did not cease so early, the sickness and mortality

were aggravated and prolonged by the increased rigour of the sanitary laws. Finally, however, as sanitary laws are sure to outlast the pestilent state of the atmosphere, they were ready, whenever the disease did cease, to lay claim to the merit of subduing it. “The *annihilation* of disease was reserved, under Providence, for His Excellency; and under similar circumstances the like event occurred at Corfu.” (p. 62.) And, under similar circumstances, I presume to affirm, that no different event would ever happen. Here we have assumption on assumption, and delusion on delusion, without end. In the whole circle of human error, can any system be found at once so absurd and pernicious?

The inhabitants of Casal Curmi, being cordoned round, “walled in,” and even “locked within their respective dwellings,” (p. 112.) what Mr. Tully calls “hermetically sealing the plague,” (p. 113) the island was deemed safe from that source of contamination! Doubtless the inhabitants of the island at large were perfectly safe: and they would have been equally safe, had those of Casal Curmi, beyond the precincts of their own town, shook hands with or embraced them. But each person that died, in consequence of being imprisoned in that village, was murdered according to law; whilst, if they had only been allowed to fall back to the walls, or to the stations occupied by the troops of the Cordon, in proper time, they might all have escaped death, and the greatest number of them sickness.

It cannot be necessary to inform the intelligent reader, that, in these strictures, I am not censuring the conduct of Sir Thomas Maitland, but illustrating the pernicious operation of a system wholly founded

in delusion. Sir Thomas, I am persuaded, was, on the day of issuing his proclamation against the poor Curmians, as miserable in his mind as any of the inhabitants of that empested town.

The author, towards the conclusion of his book, brings against myself a charge of a very grave nature, which, however, I do not feel that I shall have any very great difficulty in satisfactorily answering. He states (p. 257.) to this effect; that in a military hospital, in the Strada Vescoso, in the town of La Valetta, the soldiers occupying the superior part of the building enjoyed a perfect exemption from plague, *by reason of their seclusion and incommunication*; whilst the inhabitants of the lower part of the same building, which was divided into seven apartments, almost all perished of the disease, *caught in consequence of indiscriminate intercourse*. For the sake of brevity, I do not give the writer's precise words; but I adhere to his precise meaning. "This *fact*," he says, "was obligingly communicated to me by Dr. Greaves, inspector of military hospitals, and superintendant of quarantine in the island of Malta; the more valuable, as Dr. Greaves made the observation upon the spot, and at the moment of plague." These, and other similar allegations, contained in the pages immediately preceding, he appears to consider quite conclusive. "Here," says he, (p. 256.) "are facts of a very prominent feature; *facts more stubborn than any hitherto advanced*, and which must certainly resist all *theory* (doctrines that are at variance with facts, are not theories but *hypotheses*); they are of that imperishable texture, that in their unornamented form, are *calculated to overthrow those extraordinary towerings of fancy, which*

can alone tend to dazzle and mislead." The stratagem is well conceived, but not remarkably modest, on the part of the partisans of pestilential contagion, whose doctrines are *all assumption*, to endeavour to persuade the public, that *their random practice* is experience, and that my logical conclusions are hypothetical and visionary: but it will not succeed. We shall presently see, whose notions are really "fanciful," although perhaps not very "towering." To proceed, however, with the accusation; he goes on, after observing that marsh effluvia cannot be the cause of plague in *Malta* (which I beg it to be understood that *I* never asserted with respect to *any place*). "But the most extraordinary part of this statement is yet untold. I have been assured by Dr. Greaves, that the circumstances here narrated, relative to the security which seclusion afforded to the sick in the Hospital, in the Strada Vescoso, were communicated by him (and no doubt with the same candour and view to truth with which he was pleased to communicate it to me) to Dr. Maclean, the learned author of 'Results of an Investigation respecting epidemic and pestilential Diseases,' who was then at Malta. Dr. Greaves was not satisfied with stating the fact but he conducted Dr. Maclean, as he did myself, to the very spot, clearly pointing out every circumstance which, in his opinion, was well calculated to throw light upon the subject of Dr. Maclean's investigation. Now, with all deference to Dr. Maclean, I cannot help remarking, that his taking no notice whatever in his publication of this *truly important* information, does not argue much in favour of the candour with which he either

treated the public, or conducted his investigation ; for, however the *fact* might have militated against his favourite doctrine, it behoved him to state it. As he has not done so, we certainly are warranted in concluding that, having long previously established in his own mind, that contagion was a nonentity, the information he acquired at Malta was of that nature which he considered it better to consign to oblivion, than to submit to the test of inquiry. Facts are stubborn things, and I candidly confess, that the one just recorded is reluctantly brought forward ; but were I to act otherwise, I should be as culpable as Dr. Maclean, who, in presenting to the public his ‘Researches,’ withheld it.” (p. 260.)

Now, as I should be sorry to be considered wanting to the public, to the investigation, or to my esteemed friend Dr. Greaves, in whose house I resided whilst at Malta, and to whom I am under many obligations, I am thankful to Mr. Tully for having given me an opportunity of explaining my conduct in respect to the circumstances which he states. It is very true that Dr. Greaves did relate to me the history of the inmates of the Hospital, in the Strada Vescoso, in terms, I believe, similar, or nearly similar, to those now set forth ; for I only speak from memory. But I never dreamt of their being entitled to the importance which Mr. Tully now confers on them, and which Dr. Greaves perhaps thinks they merit. Had I noted all similar narratives, which I heard in the course of my researches, they would have filled many volumes ; and it was only when they appeared apt for the illustration of particular points, that I deemed any of them worthy of being recorded. Now, in these *alleged*

facts, for they are *not unmixed* facts, but narratives compounded of *facts* and *opinions*, there is nothing of this description. It may be fact, and I am bound to believe it such, because it is related of his own knowledge by Dr. Greaves, that the soldiers secluded in the upper part of the hospital invariably escaped, whilst the inhabitants of the lower part of the same building, not secluded, generally sickened, and for the most part died. But that the former escaped *because* they had *no* intercourse with the public, and that the latter sickened *because* they *had* intercourse with the public, are *not* facts, but *mere matters of opinion*. To admit them therefore as facts, when thus combined, would be to admit the very point in dispute; and which, if I be not labouring under an unaccountable delusion, I have already, in a thousand forms, demonstrated to be erroneous. I trust Dr. Greaves will find this a satisfactory explanation of what may have appeared to him a blamable omission. Its total want of importance, as militating against my doctrines, as well as the perfect facility with which it can be explained, will afford convincing proofs, that, although I might have been actuated by want of room, I could not have been actuated by want of candour, in not giving it admission. Indeed I cannot but think, that the readiness, which I have invariably shown, to state and to explain every allegation of my opponents, that seemed to be at all worthy of notice, ought to have exempted me from such a charge.

This is one of those very common instances of shutting up during an epidemic, in which sickness does or does not ensue, according to a great variety of circumstances, depending upon principles which I

have already, on various occasions, repeatedly explained. This practice, although by no means ensuring perfect immunity, but, on the contrary, very frequently failing, proves however, upon the whole, useful ; physically, by avoiding direct currents of pestilential air ; and morally, by inspiring a confidence of safety, and thereby obviating that very powerful cause of sickness, fear. An instance of exemption perfectly in point happened during the epidemic of Barcelona in 1821, which, from the notoriety of such occurrences, I should not, but for the occasion which calls it forth, have considered worthy of any particular notice. The palace of the Captain General of Catalonia, situated in the square of the Constitution, close to the Barceloneta gate, was, in the absence of that functionary, occupied by Major General Porras, Commandant of the Citadel, with from thirty-six to forty other persons, principally military officers. Here they were shut up, as he informed me, during the whole of the epidemic, without experiencing any sickness. Now, as the most ample proofs have been adduced of the non-contagious nature of the fever of Barcelona, this fact must be accounted for otherwise than by supposing that immunity was the result of non-intercourse. The building is situated in what was considered the very focus of the malady. It forms the north-east side of the square, being detached from all other buildings, and is completely sheltered from the south-east wind by the Custom House, which, with the Ramparts, form the south-east side of the square. The range of houses, constituting the north-west side of the square, having in general open virandas in front, and being without shelter, were directly blown upon by the south-east

wind, and suffered as much from the epidemic as any equal part of the town. The buildings, as well as the inhabitants, on these two sides of the square, were under very different circumstances ; and to this difference must be attributed the dissimilarity of their fate. The houses on the exposed side of the square are old and open, or, when shut up, excessively close ; whilst the palace is new and spacious, open on all sides, but at the same time well sheltered from the prevailing noxious wind ; with thick walls, capacious and lofty apartments, and windows well sashed and glazed. Whilst the inhabitants of the neighbouring houses were composed of tradespeople or labourers, who were comparatively ill fed ; necessarily exposed less or more to vicissitudes of weather ; and, from their situation as well as prejudices, more liable to depression of mind, the inmates of the palace were of a description of persons, of all others, the least likely to be affected by an epidemic. They were composed of military men, principally officers, of good constitutions, and generally in the prime of life ; with food, clothing, bedding and lodging, far superior to those of their neighbours in civil life ; together with moral qualities better fitted to counteract the influence of a pestilential atmosphere, and of surrounding scenes of calamity and distress. In fact, the circumstances were such, that if this palace had been as full of pestilential patients as the Hospital of the Seminario, the attendants on the sick would probably have enjoyed an exemption from disease very little inferior in degree to that enjoyed by the attendants in the former establishment. Let the reader, after having perused this explanation, turn over to the cases of the two families in

Barceloneta, recorded in my Notes to the Barcelona Manifesto, in which entire safety and almost utter destruction were next door neighbours, and he will perceive the manner in which very extraordinary differences may arise during epidemics, as to the fate of persons seemingly placed under circumstances nearly similar, precluding the possibility of rationally admitting such an agency as pestilential contagion into the view; from whence he may learn to estimate the case of the Maltese Hospital or Barrack of the Strada Vescoso at its just value. There the soldiers and the other inhabitants, it is true, were in the same building; but the former were above, and the latter below: and there were other differences in their situation much more material than those which depend on intercourse and non-intercourse. The degree of elevation is of itself a very material circumstance. In the Levant, as elsewhere, persons who sleep on the ground-floor are much more liable to plague and other sicknesses, than those who inhabit the higher stories. I found this fact duly appreciated in Bucharest, the capital of Wallachia. But the civil inhabitants of the lower part of the Barrack of the Strada Vescoso, besides having to sleep in the lower apartments when they came home at night, had to work all day for their subsistence, perhaps exposed to a hot sun, to be succeeded by chilling and noxious blasts; whilst the soldiers, being elevated sufficiently above the ground, and otherwise comfortable while in bed, had nothing to do, when up, but to concert measures for the amusement of the day, without the care or labour of providing subsistence, or the danger of suffering from want; and, confident of the security which they believed to

follow from seclusion, of course free from fear. We shall feel the less difficulty in assenting to the greatness of the benefits which may be conferred by elevation of residence in epidemics, the parties being otherwise dissimilarly situated, as in this case, when we find it followed by extraordinary advantages, the parties being otherwise under circumstances precisely similar. The following is an instance entirely in point. During the late prevalence of cholera morbus in India, "in the barracks of the European Regiment at Berhampore, of twenty-four casualties, seventeen took place in the four companies inhabiting the lower range." *Bengal Report*, p. 113. In a subsequent section it is proved that cholera morbus does not depend upon a specific contagion.

"For my own part," says Mr. Tully (p. 261), "the more I examine the question at issue, the more I am at a loss to account for those extraordinary opinions, which have of late been forced upon the attention of the public with such persevering industry and ingenuity." This is by no means wonderful; a mind, loaded with the superstitions or false knowledge, which constitute the doctrine of pestilential contagion, can no more discern the true state of the questions at issue, than a man whose eyes are covered with a bandage, can see to pick his steps in a difficult road; but the mind being freed from its burden of error (and, if I be not much deceived, Mr. Tully is capable of making this sacrifice of self-love), the road becomes like a bowling-green, in which a man whose eyes are scarcely yet half opened, may securely walk; a very small glimmering of light will enable him to discern, that it is *not* "opinions," but incontrovertible facts, and

logical conclusions, "which have of late been *forced* upon the attention of the public with such persevering industry and ingenuity."

There is one very important point in this stage of the discussion, respecting which I have the happiness to coincide perfectly with Mr. Tully, viz. that the specific character of pestilential contagion "must be either admitted *in its fullest extent*, or *totally rejected*," (p.) i. e. it must be admitted to exist as the *sole* cause of pestilences, or not to exist as *any part* of their cause. And this leads naturally to the conclusion, which I have so strongly insisted on in the introductory part of this volume, that, in justice and mercy to the world, sanitary laws ought, if bad, to be universally abolished; if good, to be universally extended. In the former case, calamitous consequences, our author pathetically prognosticates, "will be speedily and fatally proclaimed to the world." The system of pestilential contagion is a curious superstructure of faith, enforced by terror. I have elsewhere pointed out its close affinity to the superstitions respecting witchcraft and ghosts.

"Before I conclude," says Mr. Tully (p. 276), "it behoves me to observe, notwithstanding the view I have taken of the doctrines of the opposers of the specific contagion of plague, that it is my firm belief, our profession is totally free from the imputation of having amongst us those who *would wantonly hurt their fellow-creatures to destruction*." Of this ambiguous compliment, and rather unphilosophical absolute, I believe I may, without incurring the charge of usurpation or of vanity, take to myself by much the largest share. It is difficult to conceive that in

any profession there can be members, excepting under mental alienation, having a propensity to go about the world seeking whom they might destroy ; or, that in their good or bad wishes for the welfare of their species, members of the medical can be differently constituted from those of other professions. To absolve opponents from intentions which cannot without absurdity be imputed to them, is at the least supererogatory. No man can for a moment be supposed, without considering him insane in the highest degree, to wish either for the maintenance or the abolition of sanitary laws for mere purposes of destruction : and if it were otherwise, the imputation would be equally applicable to either side. The sole considerations are, whether those establishments do, in fact, produce salutary or noxious effects.

Considering the number of my writings upon this subject, and of the critics who have done me the honour to comment upon them, it may be taken as no mean proof of general accuracy, or of a scrupulous adherence to fact, that no commentator, however well disposed, has been able to fix upon me a colourable charge of an intentional or blameable fault, even of omission. Had a single error of importance been discovered by my lynx-eyed adversaries, I need not say with what exultation the discovery would have been blazoned abroad. Fortunately for my mistakes, of which I have not the folly to suppose that I have not committed many, the *forte* of my opponents does not appear to consist in perceiving the things that are—they are “thorough-bred Gnostics, who know what is *not*.” The accusation of want of candour, speci-

fically and candidly preferred by Mr. Tully, in the single instance of the omission to narrate a circumstance which I considered unworthy of notice, augmented in the usual ratio by repetition, has been converted into a "*total* want of candour" by other commentators having by no means equal pretensions to knowledge on the subject. Two joint stock writers, the one a physician, and the other a lawyer, who, "in spite of nature and their stars," had determined to furnish the world with a "bran new" code of laws, *for the preservation of the public health*, resolved also, that their superstructure should rest upon no less unperishable a foundation than that of the eximious doctrine of pestilential contagion. To dig for foundations in quagmires; to make ropes of sand; or to build castles in the air, or even in Spain *, must be acknowledged to be exploits of some little difficulty. But in order to have a chance of toleration for this attempt to perpetuate, upon an imaginary foundation, a system for the wholesale incarceration of mankind, it was indispensable to resort to some brief mode of refuting my refutations of the non-existence of pestilential contagion; than which nothing could be more easy by the help of "the received doctrine" of assumptions. These writers, then, honestly assume, that "Mr. Tully has lately furnished the public with *some* striking instances of the *total* want of candour with which Dr. Maclean pursued his researches; but the *fact* is, that he determined 'on the plague being *non-conta-*

* "*Batir des chateaux en Espagne*" is a familiar French proverb.

gious, long before he ever visited those countries where it prevails *.” I did at any rate afterwards visit those countries, in order to ascertain whether my theoretical deductions admitted of practical confirmation ; whilst my commentators, more prudently perhaps, remained at home, quite satisfied with the authority of the tales of Boccacio, Fracastorius, and Pope Paul III., the popular tales of Miss Edgeworth, and the unpopular tales of a host of learned professors of the dark and present ages, coolly making up their minds concerning the properties of the plague of the Levant, without quitting the purlieus of Warwick-lane, or the precincts of the courts of law. Like the Committees of Physicians of 1800 and 1805, and the College in 1818, they do not appear to doubt that it is innocent, becoming, and *philosophical*, to take all the tales which have ever been invented relating to pestilential contagion upon trust, or to recommend the perpetuation of a code of laws founded upon them, affecting the health, life, liberty and property, of every human being in the universe ; conduct which, although unfortunately not punishable by law, is morally criminal in

* “ Medical Jurisprudence.” By J. A. Paris, F.R.S. F.L.S. Fellow of the Royal College of Physicians ; and J. S. M. Fonblanque, Esq., Barrister at Law, in 3 Vols. 8vo, 1823. Vol. i. p. 112. The authors, not having the fool-hardiness to rely on the intrinsic merits of their work, have, with equal wisdom and propriety, placed it under the protection of the heads of the law and of physic, who are the natural guardians of doctrines which are not injurious to *either of the professions*. When law and physic, unfeud, thus formally unite, professedly to confer benefits on mankind, I own, albeit not given to despondency, that I entertain most melancholy forebodings respecting health, life, liberty, and property.

the extreme, and will be stamped, as it deserves, by the reprobation of the public opinion of present and future generations.

The limits of their work not allowing these philosophers “to be prodigal in illustrations,” they refer in proof of my ignorance, to “a very interesting memoir by Dr. Yeats (a Fellow of the College) in the Journal of Science and the Arts,” in which he endeavours to show that, *with the exception of those of Hippocrates and Celsus*, the writings of the ancients, the poets especially, “evinced their belief in the doctrine of pestilential contagion,” although they were *not sufficiently enlightened to have discovered the value of sanitary laws*. That invention was reserved for the brilliant æra of the 16th century! In the 19th volume of the London Medical Repository, I have given ample proofs that such a doctrine was wholly unknown to the ancients, including a refutation of this vaunted paper of Dr. Yeats; omitting, it is true, to mention his name, but designating him a writer in the Journal of Science and the Arts. The authors of “Medical Jurisprudence” had not, I should presume, perused this paper in the London Medical Repository,—probably it had not appeared—when their observations were written, otherwise their tone of confidence would be the more censurable and surprising.

The following acknowledgement from our Medico-forensic firm is entirely condescending:—“To Dr. Maclean, however, the medical world are certainly greatly indebted,” (p. 112,)—for what, reader, do you think? for having called forth “the many able elucidations which the *experience* and *science* of this country have since afforded” in respect to the ques-

tion of pestilential contagion ; in short, for having elicited the profound views of the London College of Physicians, which adorn the second section of this volume, and are to be found more in detail in the evidence adduced before the Committee of the House of Commons in 1819 ! It seems that, if I have no knowledge of my own, I am the cause of knowledge in others : and that may be sometimes no mean merit, particularly if that knowledge be true. But the world are not now to be informed that simple ignorance is as much preferable to false knowledge, as innoxiousness is to mischievousness ; or that exclusive privileges to medical bodies, in proportion as they augment their stock in trade, render a stock of ideas the less necessary.

“ It may be thought extraordinary,” proceed those twin luminaries of Physic and the Bar, “ that a work so unphilosophical, as that to which we allude, should have created so strong a public sensation ;” and but for *mauvaise honte*, a troublesome endemic of the two professions, they would have added, “ whilst the inductions of experiment, by which our associates and ourselves have proffered to enlighten the world, are ungratefully disregarded.” Let them not, however, despair ; but recollecting how slow great discoveries and works of genius have generally been in finding their way to public favour, console themselves for the ephemeral preference which has been shown by vulgar minds to the meaner labours of an “ *alienus homo**.”

My ingenious and learned commentators, if they do not admire me as a physician, admit by implica-

* A man not of the College of Physicians.

tion that I might have made a tolerable lawyer : “ With respect to the work of Dr. Maclean, we would further observe, that he has artfully brought together all those facts which are calculated to afford any support to his doctrine, while he has so ingeniously tortured those that make against it, as to disguise their force and true bearings.” vol. i. pp. 111, 112. What I principally complain of is, that I cannot, when cruelly disposed, procure for love or money even a single adverse fact to torture ; and I hereby spontaneously promise my opponents generally, that if they will do me the favour to supply me with but *one* fact in proof of their doctrine, I will not torture but cherish it ; and, in order further to evince my gratitude, I engage, *ipso facto*, henceforth and for ever, to renounce all my non-contagious conclusions. Had I authority over the finances of a State, I would even offer a very high premium for the discovery of a solitary fact of this kind, or for the importation, from any country of the earth, or from the moon, for that planet doubtless abounds with it, of the smallest particle of the contagious *virus* of any epidemic !

Having sufficiently adverted to the *facts* of my learned adversaries, let us for a moment turn our attention to an edifying specimen of their conclusions : “ What can be the organization of that man’s mind,” they significantly ask, “ who goes into the *Greek Pest Hospital at Constantinople*, and, according to his own statement, is attacked *on the fifth day* after he entered it with the plague, and yet *continues to assert*, that the malady is *non-contagious* ? (p. 112.) Differences of conclusions, I suspect, must depend rather upon mental furniture, than organization ; and

the phænomenon which appears to have excited so much suspicion in the minds of so many of my learned colleagues, might probably admit of a solution by a slight craniological process. If on the one side we should find the protuberances of pestilential contagion, whether of cholera, plague, yellow fever, typhus, dysentery, diarrhœa, or even scurvy, in full vigour, while on the other side they had either never existed or are wholly obliterated, will not such a difference naturally account for the greatest possible difference in conclusions? But without waiting for these *post mortem* appearances, which can only be of use to our successors, let us examine this phænomenon by the lights of our reason, upon the grounds that are actually before us. The proposition of my commentators, as far as it can be analysed, is, that a plague which attacks a person in a *Greek Pest Hospital at Constantinople*, on the *fifth day* of his residence, *must depend upon contagion*, and *cannot depend upon any other cause.*" Now, *causa argumentandi*, I will grant them all this; and then let us see what will be the consequences. There were twenty persons in health, or in a few instances with slight ailments, who had resided for months or years in the hospital, and were in daily communication with a succession of pestiferous patients, yet had not the disease: but if twenty persons in health, or with slight ailments, can be for months or years in daily intercourse with pestiferous patients, without becoming pestiferous, whilst one only who was so circumstanced, was affected; is not the conclusion inevitable, that the disease is not contagious? Here then, supposing that the fact of contact were evidence of contagion, there would be *twenty*

to one in respect to number, without reckoning time, against the disease by which I was affected at the Greek Hospital, being the product of a specific *virus*. My commentators, it is true, may allege that the *virus* of this particular pestilence had a preference for physicians, as Fracastorius had found that the epidemic with which he frightened the Fathers of the Council of Trent had a preference for persons of quality; and in corroboration of this opinion they might adduce the fact, that Dr. Valli was, in the very same month of August, and in the very same hospital, attacked with plague, whilst his personal attendants, and those of the establishment, enjoyed a complete immunity. (Results, ii. 270.) He was indeed a much longer time in the hospital than I was before he was affected with disease: but for this the pestilential contagionists will, according to the doctrine of assumptions, easily account, by the one being an Italian and the other a Briton; the inference being, that the contagion of plague has a preference for British physicians, especially of the non-contagionist breed: or, it may be with equal readiness accounted for by Dr. Pym's celebrated doctrine of the capriciousness of pestilential contagion. Thus Mr. Van Rosenfeldt, who in 1816-17 conducted experiments in the *Greek Pest Hospital at Pera*, was on the 38th day seized with the plague, and in two days, died (Results, ii. 296.). The cases alluded to will then give the following results: The contagion of plague affects a *British physician*, being a *non-contagionist*, in the *Greek Pest Hospital at Constantinople*, in the month of *August*, in *five days* from its application; in the same month, or in the month of *September*, in the

same situation, it does not affect an *Italian* physician, being a *contagionist*, in less than four or five weeks*: it does not affect natives, not physicians, in *five years*. In the *Greek Pest Hospital* at *Pera*, the contagion of plague does not affect a *German*, not being a physician, but acting as a physician, in *less than thirty-eight days* after exposure to the cause, both by contact with the pestiferous, and by frequent friction of matter from plague sores. Whether and how far his being a German and not a physician, but a pro-physician, had an influence on the period of his attack, or whether these circumstances counteracted each other, let pestilential contagionists decide. I am only in this case a narrator of facts. Nor ought these caprices to surprise us, when we read, that during pestilences in England, Englishmen abroad, but neither Scotchmen nor Irishmen, have been affected by the prevailing malady of their country. This, I presume, might be called sympathetic contagion.

So much for the consequences attempted to be deduced from the fact of my being seized with the plague. From their conclusions, I should presume my commentators must have studied their medical logic under Sir Gilbert Blane, and their medical philosophy under the confidential adviser of the Privy

* The precise period from his entrance into the hospital, at which Dr. Valli fell sick, is not stated in the narrative; but from a comparison of circumstances, I am led to infer that it was probably longer than five weeks. In respect to this fact, however, precision is quite immaterial. That epidemics have not, like contagious general diseases, any determinate period of attack, after the causes of sickness have been applied, is a fact established beyond all doubt.

Council in matters of quarantine. In sober earnest, it is impossible for any ridicule to do justice to the almost incredible absurdity of this system of doctrines. Had I perished in the course of my experiments in the Levant, it might with some plausibility have been said of me by these commentators, as Mr. Tully has said of Dr. M'Adam (p. 76), that I fell a victim to my want of belief in the contagion of the plague; they would have been credited by the multitude, great and small; and epidemic diseases might have remained contagious, and sanitary laws have been employed "to *chain* those *hurricanes* of the human frame" for ages to come. But

"I survive,

To mock the expectations of the world;
To frustrate prophecies, and to raze out
Rotten opinion."

SHAKESPEARE.

SECTION XXXII.

OBSERVATIONS ON THE EPIDEMIC OF THE MILLBANK PENITENTIARY, IN 1823, COMPOUNDED OF SCURVY, DIARRHŒA AND DYSENTERY, FROM THE REPORT OF THE COMMITTEE OF THE HOUSE OF COMMONS, 8TH JULY, 1823.

“ In quest of sites, avoid the mournful plain
Where osiers thrive, and trees that love the lake.”

ARMSTRONG.

“ Whatever shapes of death,
Shook from the hideous chambers of the globe,
Swarm thro' the shuddering air ; whatever plagues
Or meagre famine breeds, or with slow wings
Rise from the putrid wat'ry element.”—*IBID.*

THE evidence adduced on the subject of this singular epidemic, or complication of epidemics, supplies the following important results :—1. That, owing to the erroneous and complicated views which are entertained respecting the cause of epidemic maladies, nations are perpetually exposed to an immense waste of money* and of life. 2. That, in proportion to the number and degree of the agencies, constituting the sum total of the causes of pestilences, so is the diversity of their phænomena. 3. That there prevail upon this subject, among medical men, the most

* The sum total voted by Parliament for the building of the Penitentiary at Millbank, amounts to £458,000.—*Appendix to Report*, p. 396.

extraordinary and lamentable differences of opinion.

4. That a tardy and ungracious acknowledgement has been at length elicited from the Faculty, of the discovery of important principles of cure. And, 5. That further proofs are evolved of the non-existence of pestilential contagion. It is the last of these points only, which I shall here particularly examine.

In the autumn of 1822, without any discernible increase of sickness, it was noticed by the officers of the establishment, that the general vigour of the prisoners in the Penitentiary began visibly to decline. About Christmas some increase of sickness took place, especially among the female prisoners; and about the 11th, 12th, or 13th of January, 1823, some cases of scurvy were first noticed, and reported by the Medical Superintendant, Dr. Hutchison. From this period, scurvy, diarrhœa and dysentery, combined or separate, continued to increase; and in the beginning of March, 1823, there were 448 patients, or more than the half of all the prisoners, labouring under one or other, or a complication of these disorders. "Between the fourteenth of February and the first of March, forty-eight patients came into the infirmaries affected chiefly with diarrhœa and dysentery." The following table exhibits the proportions, which at this latter period the female bore to the male patients, and shows that the prisoners generally, who had been confined during the longest period, were the most numerously affected. Among the males, the progression was as 23, 47, 55, 68, and 78 *per cent.*; among the females higher, as 32, 70, 70, 82, and 43 (see Table). This last appears to be an exception: but when examined, its explanation is obvious. This small *per*

centage occurred among the women who had been confined above four years, of which the whole number amounted only to twenty-three; of these only ten were ill; but eleven were in the kitchen, and of these only one, who had been promoted to the kitchen but four days, was ill. This last one being reckoned among those not in the kitchen, and those in the kitchen not being reckoned at all, since there was no illness among them, the proportion would then be, ten sick out of thirteen, or nearly eighty *per cent.*: or had the women in the kitchen been sick in the same proportion with the others, the result would have been the same: so that in this class also, upon a fair consideration of the circumstances, the usual ratio will be found to have been maintained. The very high proportion of seventy *per cent.* upon the female prisoners who had been only between one and two years confined, is a deviation towards the opposite extreme, which, if all the circumstances were equally well known, would doubtless admit of being with equal facility accounted for.

NUMBERS AFFECTED WITH THE DISEASE.

Table of the Number of Prisoners of different Denominations, who were labouring under one or other of the Forms of the Scorbutic Disease, in the General Penitentiary, in the Beginning of March 1823.

MARCH 1823.		Total Number of Prisoners.	Number ill of the Disease.	Equivalent Number per Cent.
MALES.	First Class	309	110	35
	Second Class	222	121	54
	Confined under 1 year	173*	40	23
	..... between 1 and 2 years ..	156	74	47
	..... between 2 and 3 years ..	165	91	55
	..... between 3 and 4 years ..	28	19	68
	..... above 4 years	9	7	78
	Total Males	531	231	44
FEMALES.	First Class	94	52	55
	Second Class	233	165	71
	Confined under 1 year	37	12	32
	..... between 1 and 2 years..	93	65	70
	..... between 2 and 3 years..	106	74	70
	..... between 3 and 4 years..	68	56	82
	..... above 4 years	23	10	43
	Total Females	327	217	66
Of both Sexes.	First Class	403	162	40
	Second Class	455	826	63
	Total Prisoners	858	448	52

* Of these, 85 had been received into the prison since the 1st of January, and therefore had been subject for a much shorter time to the influence of the presumed causes of the disease.

On the 4th of July 1822, a new dietary had been introduced (p. 41), in which the allowance of meat for each prisoner was little more than nine ounces a week, the former dietary allowing thirty-six ounces (p. 49). Here was at least one very palpable cause of sickness, especially of scurvy. But even respecting so clear a case, there was no general agreement among the medical authorities examined upon this occasion. While some of the witnesses were for considering the dietary as almost the sole cause of the prevailing disease, others were for holding it quite exempt from blame, and would perhaps, in order to maintain their consistency, have ventured to reduce it still further. Another no less obvious cause, and which I should have been disposed to regard as the chief one, was the situation of the Penitentiary, which is so self-evidently unhealthy, that it is to be presumed that those who had been the means of consigning our army to Walcheren, and our penitents to Millbank, if indeed these two projects were not planned by the same heads, must have possessed about an equal share of knowledge respecting epidemic diseases. Had such knowledge existed in the proper degree among the medical advisers of Government, or had those advisers faithfully discharged their duty, neither of these calamities would have happened. The perfect unanimity in exempting the situation from all blame on the part of medical witnesses, who, in respect to some of the other supposed causes, as well as to the treatment, do not appear to have entertained any one opinion in common, is a matter of still greater surprise. Cold, the season, want of air and exercise, and *moral causes* (as they have chosen to denominate deficiency of

mental excitation, as if it were something positive), have been variously dwelt upon by various witnesses ; but not with any very happy effect. I do not mean wholly to deny the influence of each of those causes in some particular cases, or that they might have contributed a small share generally towards the sum total of the causes of the prevailing malady. But it seems to me to border closely upon the ridiculous, among such a description of persons as composed the inhabitants of the Penitentiary, where physical wants are almost the sole consideration, to attribute so much influence to "moral causes" as the witnesses have generally done. Between the proportional number of sick from among those who have been confined under one year and above four, the difference is among the males fifty-five *per cent.*, and among the females nearly as much. Must not this great difference be attributed principally to situation ? Is it likely that it would have been near so great under otherwise similar circumstances, in any of the prisons on more elevated situations even in and about London ? Would it have been half so great in such places as Dorchester, Devizes, and the other country jails or houses of correction placed in healthy situations, which have been adverted to ? No one will maintain that there would not be a considerable difference, excepting such as are prepared to affirm that pure air cannot counteract, or impure air augment, the deleterious effects of noxious agents. In considering this part of the subject on a more extended scale, when I come to treat of the causes and means of prevention of epidemic maladies, I shall endeavour to assign to each of the causes operating upon this occasion its probable

relative proportion to the sum total of noxious power, by which the malady was produced, taking the situation and the dietary as unquestionably the two principal causes, and allowing its due share to each of the others.

I shall now proceed to examine the question of the alleged contagious properties of this malady, which, I may observe, would undoubtedly have been more decidedly fastened upon it, serving as a cover both to the situation and the dietary, had the disease occurred previous to the promulgation of my doctrines respecting epidemic diseases. If any epidemic could depend upon a specific contagion, it would certainly be reasonable to conclude that one in which more than the half, or fifty-two *per cent.*, of a whole community is affected, must depend upon such a source; and scurvy, diarrhœa, and dysentery have each at different times been reputed contagious. Accordingly, although the physicians, even of the old school, hesitate and are uncertain, the Committee still cling to this favourite cause: "Your Committee directed their inquiry to the important fact, whether the disease could be considered as contagious. All the medical practitioners whom they examined, with the exception of Mr. White, considered it to be so in no degree; yet your Committee, though of course not inclined to contest the opinions of medical men of such science and eminence, cannot avoid remarking, that recently some of the inferior officers of the prison have been attacked with the prevailing diarrhœa; and of fifty-nine males and four females, who have been received into the Penitentiary since the 3rd of March, twenty males and one female have been ill of the same com-

plaint." (Report.) By the evidence we find that Mr. A. White "has been disposed to think the disease" contagious *lately* (p. 69); that *Sir James M^r Gregor* during the course of thirty years, that he has occasionally seen sea scurvy, has never seen it contagious; but that he is by no means prepared to say that it is *not*, &c. (p. 83); and that *Sir Gilbert Blane*, although "an old doctor at Portsmouth said it became infectious (contagious) in a whole district there," (p. 66,) owns that he "has never been able himself to ascertain whether it be contagious or not contagious." (p. 94, 95.)

It is more remarkable that Drs. Roget and Latham, who in their able Report of the 5th of April (p. 387—391) decidedly stated their opinion of the cause, entering into a rather elaborate vindication of the salubrity of the situation, without even once alluding to a specific contagion, should, in their Report of the 4th of July, have thought proper to return in some measure to that exploded doctrine: "In our Report to the Committee of the 5th of April, we ascribed the forms of disease then prevalent in the Penitentiary mainly to the influence of diet and cold, and our opinion has been confirmed by that of other physicians who have been consulted upon this point. But many prisoners admitted since the diet thought to be injurious has been changed, and since the weather has become milder, have become the subjects of dysentery; and several of the officers of the establishment most employed about the sick have suffered the same disease. Unquestionably, then, we do believe that some injurious influence has been in operation, over and above the causes to which the epidemic

was originally imputed. This injurious influence may have been present from the first, or it may have been subsequently superadded. Whatever it be, it has hitherto eluded our detection ; and whether it is or is not in operation at present we cannot tell. If it consist of *contagion* (and such possibly may be the case), dysentery will still probably linger in the prison *as long as any remain there who have not suffered it* ; and then it will entirely disappear. If it consist of something *peculiar to the place* or to the season, or to the moral and physical condition of people so confined, it may be still capable of renewing the same disease, or of creating another form of epidemic." (p. 394.) "The difficulty of detecting this cause," of which they confess that they are ignorant, they say, "is inherent in the subject itself." (p. 395.) This is indeed a sad falling off ; and shows that second thoughts are by no means always the best, any more than consultations of physicians are always beneficial : that "several of the officers of the establishment most employed about the sick have suffered the same disease," afforded not the least ground for a change of opinion towards contagion ; for it is self-evident (if the bandage over the pestilential contagionists' eyes could allow them to perceive self-evident truths) that persons who are much with the sick, in the same noxious air, which was a principal cause of their malady, and who in the course of their attendance undergo fatigue, will be liable to suffer ; whilst medical men and others, who make but transient visits, enjoy an entire immunity. But if epidemics depended upon contagion, no officers of the establishment who approached the patients, no medical man, or any other, who

made the most transient visit to the sick, could escape disease; and all those diseases being capable of affecting the same person repeatedly, their ravages would never cease until communities were extinguished. Consequently, did contagion exist here, dysentery would not cease in the prison, as erroneously inferred, as soon as all its inmates had been once affected, (*passed* the disease, as the phrase is,) but, on the contrary, would proceed in a perpetual circle, affecting again and again those who had already repeatedly recovered, as long as an individual of them remained alive.

What the causes of this epidemic were, as well as what they were not, are matters not of opinion, but of inference. But medicine, it seems, abhors induction, as nature we are told abhors a vacuum. According to the plan of this volume, our business at present is not to ascertain the precise nature of the proper causes of the malady in question, or the probable degree in which they have respectively acted; but merely to show that pestilential contagion was not one of them. To this end I may observe, in the first place, that as there were abundant obvious and undeniable causes operating in sufficient force to produce the disease; and as diseases which depend upon a specific contagion never depend upon any other cause; either the other sufficient causes or the specific contagion must be wholly abandoned. But this is not optional. We cannot renounce causes that are undeniable, for one that is only conjectural; contagion must therefore of necessity be abandoned. Assuming, however, that we have a choice—that we are at liberty to reject those causes which are palpable

and notorious, and to adopt the imaginary one of a specific *virus*; let us examine whether its existence is compatible with the phænomena of this epidemic. How, upon this supposition, shall we explain the fact that those prisoners who had been confined above four years, were affected in greater numbers than those who had been confined under one year, in the proportion of fifty-five *per cent.*, unless by the absurd assumption, that the susceptibility for a specific contagion is augmented in that ratio by confinement? Again, how shall we explain the fact, that of twenty-four persons, thirteen males and eleven females employed in the kitchens, and having unrestrained intercourse with the sick, not one was affected, excepting three who had been only four days promoted to that station, (p. 388,) unless by the ridiculous supposition, that a residence in the kitchen destroys all susceptibility to contagion? Nor is the phænomenon upon any rational principle less inexplicable, that the officers and servants of the establishment, together with their families, residing within the walls of the prison, having unrestrained intercourse with the sick, and amounting to one hundred and six individuals, or one ninth of the whole community, should have remained universally exempt from disease. The immunity of all the medical men, who were of necessity frequently in communication or contact with the sick, is another fact wholly incompatible with contagion. But pestilential contagionists, whilst they will not admit that the *general* exemption of medical men from the prevailing disease during an epidemic, is proof of the *non-existence* of contagion, affirm, with the usual consistency of their creed, that the sickness of *an in-*

dividual physician, as in reference to my own case at the lazaretto of the Seven Towers, is proof of the existence of that property. If this complicated epidemic had depended upon contagion, there must have been a distinct *virus* for each form of the disease ; one for scurvy, one for diarrhœa, and one for dysentery ; and, in such a case, seeing that predisposition is not necessary to contagion, how could forty-eight *per cent.* of the community have remained unaffected ? To suppose that the disease was contagious, because persons were seized who had entered subsequently to the abandonment of the pernicious dietary, which took place in the beginning of March 1823, is to suppose that there could be no causes adequate to produce the effect, but a deficient diet or contagion. And if all the officers and attendants of the establishment, who assuredly did not suffer from a scanty diet, had been affected, it would still be no proof of the existence of contagion ; but only a proof that the noxious circumstances incidental to the situation, and probably the season, were of sufficient degree to produce disease, independent of all aid from deficiency of food. A pestilence capable of affecting all the officers and attendants, would not probably have left a single prisoner alive. That the disease did not occur in former years, is no conclusive argument in favour of the salubrity of the situation. The most unhealthy places remain often for years exempt from disease. There were for the first three or four years but few prisoners at the Penitentiary. But the moment the establishment began to fill, and when the period of confinement of some of the prisoners had extended to a few years, upon the additional cause of the low dietary

being superadded, sickness burst forth ; and a still smaller degree of this additional cause would probably suffice, in each successive year, to produce an equal sum of sickness, until the extension of imprisonment should have arrived at its ultimate point. It is then much to be regretted, that, by such after thoughts concerning the phantom of pestilential contagion, Drs. Roget and Latham should have sullied the lustre of their preceding truly philosophical Report, which, in order to be perfect, wanted little besides the omission of their rather elaborate vindication of the salubrity of the site of the Millbank prison, and the honest acknowledgement of its palpable insalubrity.

SECTION XXXIII.

PROOFS FROM OFFICIAL REPORTS OF THE NON-CONTAGION OF CHOLERA MORBUS, AS THAT PESTILENCE HAS, FOR THE LAST EIGHT YEARS, PREVAILED IN VARIOUS COUNTRIES OF THE EAST.

“The whole body of the medical officers in Bengal, *who have had an opportunity of seeing and remarking on the disease, without a dissenting voice concur in declaring that it is not contagious.*”—*Report of the Bengal Medical Board*, p. 124.

NO pestilence which has yet appeared, in any age or nation, could be better entitled to be considered contagious, upon the grounds on which such a property has usually been assigned to plague and other epidemic diseases, than that singularly erratic and destructive malady, which has for the last eight years been successively ravaging Hindostan and other countries of the East, known under the name of *Cholera Morbus*. In that almost infinite diversity of symptoms, which has obtained for plague the epithet proteiform, and which has so greatly puzzled and perplexed medical investigators, the cholera morbus of India has even appeared to surpass that celebrated form of epidemic. It would be inconsistent with my plan to enter here upon any description of symptoms, or indeed upon any other part of the subject, than those

which directly affect the question of the existence or non-existence of contagion, as the cause of the disease. Were this question to be decided by numbers or authority, the task might be accomplished in a very few words. In no quarter of India did its contagious nature “form any part of the popular belief.”—*Bengal Report*, p. 123. And, with respect to the Faculty: “The whole body of the medical officers in Bengal, *who have had an opportunity of seeing and remarking on the disease, without a dissenting voice* concur in declaring that it is not contagious.”—*Beng. Rep.* p. 124. It also appears very clearly, that a great majority of the medical officers of the Bombay Presidency were of the same opinion with those of Bengal, notwithstanding the authority of the members of the Medical Board individually on the opposite side of the question. Assistant Surgeon Anderson, writing from Poonah, 14th Aug. 1818, says: “The idea that it is of a contagious nature is entertained by so few, and with so little reason, that it scarce merits notice.”—*Bombay Rep.* p. 141. It would indeed have been surprising, had the belief in pestilential contagion generally prevailed among medical officers, so many of whom had been my own pupils, and had heard my lectures upon the subject since the year 1808. The Medical Board of Bombay, who had not been my pupils, after having, in the Preface to the printed Reports of the officers of the establishment, placed in a prominent view all the circumstances that they conceived would militate in favour of that doctrine, give us pretty clearly to understand, that but for the number of opinions on the opposite side, precautionary measures might have been generally adopted. “Aware, how-

ever, of the doubtful nature of the ground upon which we tread, amidst the contrary opinions that have been advanced on this subject, we shall content ourselves with stating a few facts, which have been supplied by gentlemen whose reports have been already printed," &c.—*Pref. to Bombay Rep.* p. xii. Some partial attempts were indeed made to act upon this opinion; but they do not appear to have been persevered in. Mr. Assistant Surgeon Thomas Whyte, in an official letter to Dr. Milne, dated Seroor, 28th July 1818, says: "From observation, as well as analogy, I think there is no ground for the belief of some, that this disease is contagious. The opinion I learn is entertained and acted upon at Punderpoor; and if erroneous, I need not remark what ills it is calculated to produce, inasmuch as it withdraws attention from the true means of prevention," &c.—*Bomb. Rep.* pages 13, 14. It was also on one occasion acted upon in a detachment of the army. Dr. Tytler, of the Zillah of Allahabad, in a work upon this disease, which, from an opinion that it depended upon rice of deleterious properties, he has entitled "Remarks upon the Morbus Oryzeus," &c., somewhere states that a similar attempt had been made to act upon the doctrine of contagion at Jessore. Had the disease appeared some years earlier, these attempts would doubtless have been more general, and under the influence of terror they might, perhaps, have prevailed; in which case, India would have been overspread with sanitary establishments; mortality would have been multiplied tenfold; and it would have been confidently assumed, that it was fortunately owing to the operation of these institutions that the country was not wholly depopulated!

But, disregarding opinions, our business is only with facts. The first series of facts which I shall state, is that which relates to the seizure or immunity of attendants on the sick, or others having intercourse with them ; afterwards, deducing my consequences.

We are told that the medical practitioner, “ in his attendance upon patients labouring under the disease, did not find himself, or his assistants, more liable to be attacked by it than such persons as had no communication” with the sick.—*Beng. Rep.* p. 128. Of between 250 and 300 medical officers, “most of whom saw the disease largely, only *three* persons were attacked, and *one* death only occurred.”—*Beng. Rep.* p. 129. Mr. Wallace, in a letter to Dr. Milne, dated Seroor, 31st August 1818, says: “Not one of the (native) medical attendants in the hospital has been attacked, and some of them, particularly Ragoba, whom you know, has been unremitting in his care and attention. There have been also lying in the hospital three convalescent wounded Madras troopers, and one follower with a bad wound in his thigh. These men *have slept during the last six weeks in the midst of people affected with cholera, and they have all escaped the disease.*”—P. 90. Mr. Assistant Surgeon Whyte, to Dr. Milne, dated Seroor, 7th September 1818, says: “Convinced as I am of the total absence of contagion in this disease, I have observed the late revival in some measure of this opinion with some degree of pain. Surely, if it was at all contagious, the fact of its being so could not long remain doubtful I have not known one instance of dooly-bearers, friends and attendants of the sick, being so infected (contagioned) ; nor have any of our hallalchores, or hospital

assistants, suffered."—*Bengal Report*, pp. 103-4. Mr. Jukes, Garrison Surgeon, Tannah, writes to the President of the Medical Board of Bombay as follows: "I have no reason to think it has been contagious *here*; neither myself nor any of my assistants, who have been constantly amongst the sick, nor any of the hospital attendants, have had the disease. It has not gone through families when one has become affected. It is very unlike contagion, too, in many particulars. In general I think it has been remarked, that the greatest number of people are affected in any place during the first few days the disease has appeared there; whereas contagion would be quite the reverse."—*Bom. Rep.* p. 172. Of forty-four assistants under Dr. Taylor at Bombay, all of them in constant intercourse with the sick, three only were seized with the prevailing epidemic.—*Bom. Rep.* p. 195. George Ogilvy, Esq. states: "Neither have any of the hospital attendants (at the Presidency) been attacked with the epidemic, although they were in the habit of assisting the patients day and night."—*Bom. Rep.* p. 214. Frederick Corbyn, Esq., in charge of the Native Field Hospital with the centre division of the grand army, states: "All my attendants upon the sick have escaped the disease, and I have more particularly at all times of the day and night respired the atmosphere of a crowded hospital with impunity."—*Bomb. Rep. App.* p. vii. These facts are alone conclusive of the question; for, as the same disease cannot be sometimes contagious and sometimes not,—cholera, for instance, cannot be contagious at Seroor and non-contagious at Tannah or Bombay,—we must conclude, that in the few instances where the attendants on

the sick are affected, the disease does depend upon a different cause, as in the following case: Surgeon David Craw, in a letter to Dr. Andrew Jukes, dated Seroor, 30th July 1818, says: "Every one of the native attendants in the 65th hospital (that of His Majesty's 65th regiment), and they are thirty in number, has been attacked with the disease."—*Bom. Rep.* p. 46. Dr. Burrell, surgeon of the regiment, states the same fact somewhat qualified: "*Almost every attendant in the hospital (about thirty in number), in the short space of six days, has had the disease;*" adding, "*the admissions from the regiment (about 800 strong) bear no proportion to the attendants who have been taken sick.*"—P. 9. Besides that mere sickness or contact is no evidence of contagion, there is here positive evidence of its non-existence, in the disproportion of sickness among the native attendants and the European soldiers admitted from the regiment: for the difference must depend upon the situation of the hospital, or the state of predisposition of the parties, or both; and cannot depend upon a specific contagion, which could not be influenced by either circumstance.

There are also numerous other facts that point directly to the same conclusion. Mr. Whyte says: "We have seen it affecting a particular part in one cantonment for days, without reaching another part, although a constant communication was kept up between these parts all the while."—*Bomb. Rep.* p. 105. Mr. Surgeon Coats says, that whilst the disease prevailed at Nassick, a town containing perhaps 25,000 inhabitants, the troops cantoned in the neighbourhood, having free intercourse with the town, remained

in health.—*Bomb. Rep.* p. 149. “It broke out suddenly in the town and district of Allahabad in the end of March, and prevailed during several months with great malignancy, sweeping off nearly 10,000 of the inhabitants. The troops stationed in the fort and city were not affected until the middle of July following, *although holding daily and unrestrained intercourse with the townspeople.*”—*Beng. Rep.* p. 25.

“A very striking example of the non-communicability of the disease by contact was afforded in Colonel Gardner’s irregular horse, which was attacked at Kassgunj in the Doab, in August 1818. No two men were seized in the same hut, although from twenty to thirty troopers slept in each. A case exactly the opposite of this occurred in Lord Hastings’ camp at Gorruckpore. A Sepoy died of the pestilence. Five of the corps, who had shown no signs of illness, were employed to carry the body to the grave. They were all seized with the disorder during the ensuing night, and all died.”—*Beng. Rep.* p. 130. Here it may be remarked, that whilst general immunity under constant intercourse is positive proof of the non-existence of contagion, the spreading of sickness universally, under a similar intercourse, would be no proof of its existence. We must admit, that whatever causes affected the first man who was seized, were also capable of affecting all those subsequently attacked. And where is the evidence of the first man having been contagioned?

Again: “In no instance were the dooly-bearers, native compounders, or any other part of the large hospital establishments then necessarily kept up, more sickly than other descriptions of followers, although

all were often so hard worked as to be scarcely able to stand from fatigue ; nor did the soldiers, who constantly flocked to the hospitals to see and watch over their sick comrades, appear by that means to be more susceptible than others of the disease. Nor were these patients, who were ill of other disorders, although always surrounded by persons in every stage of cholera, therefore more liable to be attacked ; unless perhaps an exception be made in favour of convalescents ; a class of persons always, from debility, much predisposed to fall into fresh disease. In the centre division of the army, all this was particularly remarked ; and during the week in which the epidemic raged with so much fury, when the camp was a sick ward, and every tent was filled or surrounded with the dead or dying, the officers suffered comparatively very little. From a number that could hardly have fallen short of three hundred, only five or six deaths occurred. And it should be remembered, that at this time officers of all descriptions were equally exposed with the medical men ; for the sick had become so numerous, that even the services of all were insufficient to tend them with proper care, and duly administer the requisite remedies.”—*Beng. Rep.* pp. 130—132.

Numerous instances occurred of the junction of healthy with unhealthy corps, without the disease being propagated. A corps had been detached from the centre division of the grand army, previous to the appearance of the epidemic. It was afterwards joined by a squadron of cavalry as a reinforcement. In this squadron the disease prevailed, and after its junction several persons died ; but the original detachment remained in perfect health throughout.—*Beng. Rep.*

p. 132. On the 11th of May 1818, a detachment of ninety men of the 1st battalion of Native infantry, marched in perfect health from an inferior station to join the main body encamped at Saugor. At the place where they halted for the night, many of them were seized with cholera. It commenced at midnight, and by sun-rise twenty were affected. They with great difficulty joined the main body, although distant only five miles. Before eleven o'clock A. M., when they got to their ground, five were already dead, and two were dying. They continued to be taken ill successively, and before the end of the week "there was not a single man of this detachment who was not sent to the Hospital, labouring under cholera or other modifications of bowel complaints. The men of this party mixed promiscuously with those of the Saugor troops; and yet of the latter, not one individual got the disease."—*Beng. Rep.* pp. 133-4. "An instance of the same kind occurred in the Hansi division; excepting that here the party which escaped went into the infected medium, instead of the pestilence being carried amongst them. When the disease was at the worst with the troops composing this force, Casement's corps of irregular horse entered the camp, and continued with the division during the remainder of the service; yet it did not at all suffer."—*Beng. Rep.* p. 134. In a pestilent air, persons are not affected immediately with disease, as must happen under the application of a specific *virus*. In the left division of the army, "the 7th regiment of cavalry, and the 2d battalion of the 13th regiment of Native infantry, remained entirely exempt; and the 2d battalion of the 1st regiment had only three mild cases; while the

1st battalion of the 14th and the 2d battalion of the 28th regiments were greatly affected. The Goolundaz, gun lascars, and miners, were mildly affected; while the pioneers, drivers, &c., who had undergone the same vicissitudes of weather and fatigue, were not at all touched. Some corps lost more than a hundred, others only three or four men. This could not arise from separation, or difference of situation and diet; for all used the same food, and there was constant intercourse and daily change of ground. The same observation may be extended to the Rajpootana force, of which the right suffered more than the left portion."—*Beng. Rep.* pp. 134-5. There is only one circumstance in this statement in regard to which I materially differ from Mr. Jameson, the very able writer of this Report, of whose valuable services I regret to say that the East India Company and the public have unfortunately been deprived by a premature death. Considering the powerful influence of situation even in one night, of which we have met with striking instances, I am led, both by particular facts and general principles, to infer that this is the principal cause of the difference in the healthiness of troops stationed in the same cantonments, even although their position may be daily changed: for a few hours time, and a few paces distance, may make the whole difference between life and death. The pestilential blast may affect a quarter to-day where it was not felt yesterday; or this hour, where it was not felt the last. This principle is illustrated by the successive manner in which the inhabitants of different quarters of the same town are affected, at different periods of the same epidemic, as is so distinctly in evidence in re-

spect to the great pestilence of London in 1665.”—*Results*, vol. 1. pp. 312—320.

At Muhedpore, where the epidemic prevailed in the vicinity, and was daily attacking a detachment of Bengal troops, “it entirely spared a body of 500 of Holkar’s reformed horse; although the two camps closely joined, and a man, who had been sent in from the Bengal division after getting the disease, went through every period of it amongst the healthy Maharrattas.”—*Beng. Rep.* p. 137. “Of the cluster of islands lying near the main land, as the Ganges discharges itself into the Bay of Bengal, Sundeeep, a large and populous place, remained quite free: whilst those of Deccan, Shahbazpore, Huttiah and Bomney were ravaged. There was nevertheless constant and great intercourse between all.”—*Beng. Rep.* p. 138. *Note.* These direct facts, showing that, in respect of cholera morbus, intercourse or contact is not followed by a propagation of the disease, are conclusive of the non-existence of pestilential contagion as far as relates to that malady. Others of a less direct kind, but equally conclusive, may be here cursorily mentioned.

The simultaneity of its attacks in places far distant from each other; the general uniformity of its progress from east to west; its more frequent occurrence under the prevalence of south-easterly winds; the manner in which it followed the course of rivers; its prevalence for the most part in low, and its rare occurrence in elevated situations; the description of persons whom it chiefly attacked, or spared; and the at once regular and rapid course of increase, maturity, diminution and disappearance, which it observed, are all in perfect conformity with the laws of epi-

mic diseases, as laid down in my "Results," vol. i. *passim*. They are phænomena, each of which is singly proof sufficient that this disease belongs to the class of pestilences, and cannot therefore depend, in any degree, upon a specific contagion. I shall examine these points in the order in which they are here inserted ; and first of the simultaneity of its attacks at distant places.

"The rise and progress of the disorder were attended by such circumstances as showed it to be entirely independent of contagion for its propagation. Thus we have seen that it arose at nearly one and the same time in many different places ; and that, in the same month, nay in the same week, it was raging in the unconnected and far distant districts of Behar and Dacca. It will not be argued that the *virus* travelled, or was conveyed, over the many hundred miles intervening between the cities of Patna and Dacca, within a few days ; since all experience proves that where it really did appear to be communicated from place to place,—as along the course of the Jumna,—its march was exceedingly slow, scarcely averaging a few miles a day. The distances and successive periods of affection may be marked in a few instances. From Allahabad to Cawnpore, a distance of perhaps 120 miles, the disease took from the end of March to the second week of April to travel ; from Allahabad to Etawah, 180 miles, a month ; from Etawah to Futtigur, 60 miles, fourteen days ; from Etawah to Agra, 70 miles, a month ; from Agra to Coel, 40 miles, ten days ; from Agra to Delhi, 100 miles, twenty days ; from Delhi to Meerut, 28 miles, nine days ; from Delhi to Jeypore, 150 miles, a month ; from

Jeypore to the camp of the Rajpootana force, 25 miles, fourteen days; from Jubbulpore to Nagpore, 180 miles, forty days. The distances are, it must be observed, marked from conjecture."—*Beng. Rep.* pp. 125, 126. Admitting the successive propagation of the cause of the disorder from place to place, if that cause were a specific *virus* or contagion, it would necessarily extend in the ratio of the diffusion and celerity of intercourse, contagioning the whole continent of Asia in the space of a very few weeks.

Respecting its general course, "perhaps the most singular fact, in the whole history of the disease, was the predilection which it showed to spread in one particular direction. From the remote period of its first appearance in the eastern parts of Bengal, in the autumn of 1817, to the hour of its arrival on the Malabar coast, as has been seen in a preceding part of this Report, its path was almost uniformly from east to west; and, if we may be allowed so to express ourselves, it seemed so bent upon pursuing this westerly course, that, rather than deviate from it in an opposite direction, it would for a while desert a tract of country to which it afterwards returned under circumstances more congenial to its disposition. Thus, although it appeared in the beginning of November 1817 on both banks of the Jumna near Shergur, it did not then shoot eastward across the Doab; but, leaving all on that side of the river untouched, spread far and wide through Bundelkund, and all the districts to the west. In like manner, when it had reached Cawnpore, in the following spring, it showed a marked aversion for Bareilly and the other tracts east of the Ganges; but readily stretched through the Doab to Agra, Coel, Delhi, and

Meerut; and thence far to the west, by Hissar, Jeypore, and the detached camp of the Rajpootana force. To give another instance. Although Allahabad, and the whole of that district, were largely afflicted in March, the infection was not thence communicated to Sooltanpore, Fyzabad, Oude, and the districts bordering on the Gogra and Goomtee; but from the south-east quarter by the way of Tirhoot and Gorruckpore. The case of the small cantonment of Mulhye on the eastern frontier of Tirhoot, which would seem to have received the disease from the west, and of one or two other places, in which the range of observation was very limited, need not invalidate a rule deduced from an observance of a general course extending several thousand miles."—*Beng. Rep.* pp. 96, 97. Here the analogy is striking between the phænomena of cholera morbus, and those from which the pestilential contagionists have chosen to give the character of capriciousness to their supposed *virus* of plague.

“ Upon reference to various reports of the rise of the disorder in different parts of the country, it was discovered, that in a vast majority of instances the wind was blowing from the east or south-east quarter at the time of its breaking out. This may be stated to have been almost without exception the case in Bengal; throughout which the epidemic arose in the rainy season, when the wind blows almost invariably from the south-east. In Calcutta, Nuddeea, and many other places, indeed, the influence of particular directions in the wind was so evident, as to have at length almost justified a prediction, that the abatements and aggravations of the disorder would certainly correspond with their alternations. Thus in

Calcutta it declined in virulence and frequency as the northerly wind set in, in November 1817 ; and again recurred with a south-east wind in the following February. Its re-appearance again in April 1818 was preceded by a continuance of wind from the north-east, an uncommon quarter for that season of the year. So, in Nuddeea, the disease declined for a few days on the wind blowing steadily from the north ; but no sooner had it again veered to the east, than it recommenced its ravages. The same prevalence of easterly and southerly winds attended its progress through Tirhoot, Sarun, Behar, and Shahabad. At Moozufferpore, Buxar, and Ghazeepore, this had been the prevailing wind for some time before its appearance. In the camp of the centre division of the army, the wind, which from the 21st of the preceding month had blown strongly from the west, suddenly changed round to the east quarter on the 7th of November ; and there are grounds for believing that from that day the disease raged in camp. With the left division again, the wind ranged from east to south, from the 1st to the 14th of April. The epidemic was with them on the 9th, and abated as the wind came round to the west. The state of the winds is unfortunately omitted in the returns from the Nagpore force. With the Rajpootana force, they are stated to have been variable ; but in Jeypore, Brigadier Arnold's camp, Agra, and other stations of Central India, they were easterly during the prevalence of the disease."—*Beng. Rep.* pp. 98, 99.

The Report adverts to some striking exceptions to this rule, not however of such magnitude as to affect the general deduction, that the appearance of the epi-

demic in any particular place was usually accompanied or preceded by an easterly wind. The more frequent recurrence of this disease, during the prevalence of a south-easterly wind, was noticed by Avicenna.

The tendency of the disease to follow the course of rivers was observed in so many instances, that it can by no means be considered as accidental. "From the rise of the disorder on the banks of the Ganges and Burrumpooter, to its arrival at the mouths of the Nerbudda and Taptee, it excited the surprise of the medical observer. Thus from Sonergong in the Dacca district, where the epidemic broke out in July 1817, it crept along the banks of the Megna to Naraingunj and Dacca; attaching itself to the ferries and market places in its vicinity. In like manner it afterwards, step by step, advanced up the Burrumpooter, affecting, during its transit, the villages situated on both its margins. From the mouth of the Hooghly to its termination in the Ganges near Moorshedabad, the same peculiarity was observable. The shipping at the New Anchorage at Diamond Harbour, and along the whole channel, as high as Hooghly, was particularly affected*; and almost every village adjacent to its banks buried many of its inhabitants.

* The epidemic attacked the Honourable Company's shipping at Diamond Harbour and the New Anchorage with its usual irregularity. The first cases appeared on board the *Astell*, lying at the former station, about the 20th of September. The weather was moderate, with south-easterly winds and showers of rain; thermometer 84. Then, in the first week of October it got on board the *Phoenix*; which was moored near the muddy slimy shore of the river. The weather had now grown very sultry, the thermometer averaging 86 night and day, and scarcely a breath of

In the Bhaugulpore district the propensity was so strong, that the *virus* scarcely ever spread into the interior, whilst it almost depopulated the low lands near the Ganges. Again, in the autumn of 1817, Moozufferpore, and the villages along the Gunduk river in Tirhoot, and the station of Chupra, on a branch of the Ganges in Sarun, were alone visited ; while, at a subsequent period, the disease was thence communicated along the Gogra to numerous cities in the north-east quarter of our territories. From Allahabad upwards, along the channel of the twin branches, there forming a junction, until the *virus* was lost under the hills, it wavered so little from the line of those rivers, that hardly a town or village lying remote from their course was brought within its influence. The same rule held yet more unexceptionably in Rajpootana ; through the province of Bundelkund ; and all along the Nerbudda to the numerous branches of the Chumbul.”—*Beng. Rep.* pp. 102—105.

wind stirring. The first fatal instance at the New Anchorage occurred in the *Warren Hastings* on the 7th of October. The weather had been cloudy, with variable winds, and occasional rain ; the thermometer varying from 86 to 88. The case of this vessel is somewhat singular. A seaman was attacked on the morning of the 10th, and died at 10 o'clock. In the afternoon a party went on shore on Saugur Island to bury him. On their return to the boat, the man who had been left in charge was found lying convulsed in its bottom, and died at four next morning. Then the boatswain was seized, and, after lingering to the 15th, sunk under debility. During the ensuing five days eight others were taken ill (whether of the burying party or not is not mentioned), but in a slighter degree, and all recovered. At this time the other vessels had only one or two cases each ; and the *General Hewitt* remained perfectly healthy.

In respect to the influence of situation. “There is abundant proof that in high, dry, and generally salubrious spots, it was both less frequent in its appearance, and less general and fatal in its attacks, than in those that were low and manifestly unwholesome.” *Beng. Rep.* p. 106. In the low and stagnating climate of Bengal it tarried for years; but in the purer atmosphere of the upper provinces, it was slowly received and quickly lost.—Jessore, where the disorder first put on a malignant form, is a crowded, dirty, ill ventilated town, surrounded at all times by a thick jungle, and in the rains by an immense quantity of stagnant water.—Here the disease did unspeakable mischief; and its ravages were not diminished until the inhabitants abandoned the city. Sunergong, Dacca, and the other places in that neighbourhood which were severely visited by the disease, are completely encircled by clumps of trees, and heavy underwood of various sorts. But in Sylhet the influence of situation was perhaps more remarkable than in any other quarter. There, the villages in which it raged most extensively were considered as comparatively unhealthy, and obnoxious to fevers of an intermittent type; being exposed to the effluvia of marshes and extensive lakes, in which the Zillah abounds; particularly towards the south-west division, where the greatest number of victims fell. The Sepoy lines on the contrary, being placed from sixty to a hundred feet above the general level of the country, had scarcely any cases, excepting such as occurred in persons on guard at the different outposts.—*Beng. Rep.* pp. 107, 108.

In Calcutta, again, the disease was, from first to last, most prevalent in the lower parts of the town and

suburbs ; as the Bura Bazar, Simeleia, Dyahutta, and Suwah Bazar ; and in the suburbs, the villages of Kidderpore, Bhuwanipore, Manicktollah, Kurrya, Entally, Chitpore, and Sealdah.—These dependencies are every where intersected by pools, broad ditches and channels ; which being imperfectly drained, are in the rainy season always full of stagnant water, and rank weeds. From this plentiful source of corruption, foul air is given forth ; and as ventilation is greatly obstructed by large groves of trees, it is concentrated, until it becomes unfit for the purposes of respiration. The condition of the generality of the inhabitants of these villages is miserable in the extreme. Each hamlet is made up of many mud or straw huts, generally from six to twelve feet square, placed so close to each other as scarcely to leave room to pass between.—In every one of these wretched hovels, a whole family, sometimes consisting of six or eight persons, resides ; and not unfrequently cows, pigs, and other domestic animals. Much of the sickness of Calcutta was no doubt owing to the general crowded state of its population ; to the intermixture of Native and European habitations ; to the numerous collections of stagnant water, and filth of every sort, in many of its most central parts ; to the depth and thickness of its boundary hedge to the north, east, and south ; and to the immense quantities of trees and underwood spread over the whole of its site. A knowledge of the extent of the population of the city is yet a desideratum ; no accurate census having hitherto been taken. It has been variously conjectured at six hundred thousand, a million, and a million and-a-half. There are, however, strong grounds for believing, that

within the last thirty years it has been trebled ; and even doubled within the last ten years. Several causes have concurred to occasion this rapid augmentation. As trade and mercantile enterprise have increased and branched out into many new channels, the concourse of European settlers has become greater.—It may perhaps be assumed to have increased in a quadruple ratio within the last ten years, and more especially since the trade was thrown open. When it is considered that every European settler of any consequence attaches to his person from ten to fifty natives, and gives employment perhaps to double that number, it will be acknowledged, that from this cause alone a very sensible augmentation of the inhabitants must have arisen. Then there is the rapid increase of country-born Christians, who too have their followers, among whom must be reckoned not only domestic servants, but persons to whom occupation is given out of doors. Lastly, there is the large body of seafaring men variously connected with the vast quantity of shipping now employed in the port ; and of native workmen engaged in the dock-yards, cotton-screws, and other large establishments connected with its trading interests. The whole of the above description are in some measure dependent upon, and increase in an equal ratio with, the European settlers. But what may be strictly denominated the *Native population* of the city, has owed its great increase to other and perhaps more powerful causes. So long as the stability of the British Empire might be deemed precarious, wealthy natives felt perhaps some hesitation in placing their families and property in what might be deemed an insecure situation. Every scruple of this sort has

now disappeared ; our arms have triumphed over all opposition ; the native principalities have crumbled down ; and Calcutta has grown out of their wreck. It is now the Capital of India, and to it people of every class and denomination repair as to a place of perfect safety. Hence it may be almost taken for granted, that this part of the population has lately gone on augmenting equally rapidly with that more immediately connected with Europeans ; and that the town, taken as a whole, now contains twice as many inhabitants as it had in the end of the last century. It is the opinion of one of the most intelligent of our magistrates, that the population of the city within the Mahratta Ditch, does not fall short of eight hundred thousand ; and that, during the day, it is augmented to a million, from the influx of mechanics and labourers of all descriptions from the suburbs. Meanwhile its limits remain precisely the same. The expedient fallen upon to avoid their extension, has been to erect five or six houses on the same space of ground on which one formerly stood ; so that to the evils arising from overpopulousness have thus been added those of overcrowding. A great mischief consequent on the intermixture of European and Native dwellings, has been the accumulation of filth in every vacant space. Even the most central and valuable parts of the city are not free from this nuisance. Immediately to the east of the Government-house, and in rear of the Esplanade-row, and Cossitollah, there is a stagnant pool in which the whole neighbourhood deposit their filth, and whence a stench of the most noisome and injurious kind frequently proceeds. The rear of Durrumtollah, the Lal and Bow Bazar, and of Kulingah ;

and indeed the whole of the Native portion of the town, abounds in such sinks of putrefaction, and loudly calls for improvement. The proper authorities will best judge of the means calculated to remedy these evils; but it may not be improper to mention a few, the adoption of which would undoubtedly improve the salubrity and beauty of the city. 1. To open long and broad avenues from the circular road or outskirts of the town, to some distance in the country; and thus to break up the present almost impenetrable bound-hedge.—2. To form open, wide streets, with occasional squares and tanks in the body of the city.—3. To break up the numerous nests of huts, in the European part of the city, by purchasing the ground on which they are built, and allotting new ground in its stead in the suburbs.—4. To fill up all the unwholesome tanks and foul puddles and ditches.—5. To improve the draining, if practicable.—6. To disuse the present European and Mossulman burying-grounds, which lie exactly to windward of the most populous part of the city during the unhealthy season, and to form others to the north or north-east of the town.—Lastly. To diminish the number of trees, and thin the jungles in the town and suburbs. Some measures of this sort will soon become imperiously necessary to prevent the city from becoming, under its daily increasing population, as proverbial for unhealthiness as Batavia, or Spanish Town in Jamaica. To that excellent and indefatigable magistrate, the late Mr. Eliot, the community of Calcutta is highly indebted for the many great improvements which he has introduced. It was under his superintendence that the city, which ten years ago was a perfect swamp in the rains, was

first properly drained. It is melancholy to reflect, that he fell an early victim to the epidemic, whilst maturing and carrying into effect those curative measures, which saved the lives of thousands.—*Beng. Rep.* p. 108—113.

It may be proper hereto observe, that, in consequence of the circumstances of the epidemic, a Committee has been appointed for the improvement of Calcutta and its vicinity; whose duties are generally to direct tanks to be constructed; roads to be opened; streets to be widened; drains to be made; ditches to be filled; nuisances to be removed, and such other measures to be adopted as are calculated to promote the beauty, cleanliness, convenience, and salubrity of the town, and the comfort and welfare of its inhabitants. To the purposes of this establishment a great proportion of the lottery funds is regularly appropriated; and the exertions of the Committee have been liberally countenanced both by the Bengal Government and the Court of Directors. Their labours have been already productive of incalculable benefits to this noble city: and their value would be further enhanced in the event of the recurrence of cholera morbus, or any other epidemic.

The Native Insane Hospital built in a low swampy spot, and such parts of the shipping as lay near the slimy banks of the river, were likewise peculiarly subject to the disease, whilst the dry jail of the Court of Requests, containing nearly four hundred debtors, continued almost wholly exempt.

In the Native jail of Alipore, favourably situated, containing several thousand persons, scarcely a case appeared; whilst the prisoners employed at the out-

posts, and labouring in the sun in cleansing drains during the day, and sleeping in mud buildings at night, were very sickly.

In Nuddeea, high and dry places and upper-roomed houses were more free than marshy spots with luxuriant vegetation. In the barracks of the European regiment at Berhampore, *of twenty-four casualties, seventeen took place in the four companies inhabiting the lower range.* In Malda, only the villages lying in the flats near the Mahanuddee river were attacked. In Bhaugulpore, all the lofty open country escaped, whilst those parts most subject to fevers suffered severely, as Calcapore, Rajmahl, Peealapore, Tarapore, and Luchmunpore. The troops and followers in the cantonments of Carringur entirely escaped; although two villages situated immediately on their boundary ditch suffered dreadfully; but the cantonments were seventy-two feet above the villages. When the disease appeared first in Tirhoot, there had been a previous unusual inundation, and the low villages near the river were alone affected; so in Sarun the disorder arose shortly after a branch of the Ganges had rapidly fallen, and left the town exposed to the noxious smell proceeding from its large oozy banks. The only place accordingly left unaffected was the jail; which was clean, airy, and situated in an open space at a distance from other buildings. The same favourable localities nearly saved the Tirhoot jail. In the dry and well ventilated cantonments of Mullhye, only three instances of the disease occurred; while the neighbouring villages, which were remarkable for their filthy and close state, were so sickly as to be deserted by the inhabitants. So in Poornea, the lines

of the provincial battalion and jail were quite exempt, when the disease was extensively fatal in the town. In Napaul, all the villages on the slopes of the hills remained free, whilst the towns of Khatmandoo, Patun, and Bhatgoon, in the vicinity of which there was much stagnant water, were severely visited. At Lucknow, the cantonments built on a dry and sandy soil, elevated somewhat above the general surface of the country, enjoyed nearly entire immunity, when the low and crowded city was greatly ravaged. Both here and at Mullhye, the sepoy's became affected upon proceeding on guard to places within the range of the unhealthy action. The same variation of freedom and exemption was observable in almost all the towns on the Jumna subjected to the epidemic. Agra, an airy, open, clean town, was comparatively free: Muttra, a filthy place with crowded bazars, was severely scourged. The cantonment of Nomilla, adjacent to Agra, being high and perfectly clean, was hardly touched. How different was it with the cantonments at Muttra! There the disease, after remaining in the city from the beginning of the month, on the 27th of June got into the lines of the 4th regiment of cavalry; these formed the most distant part of the cantonment, being fully two miles off, but were placed on very low ground near the banks of the river:—in them the disorder was most severe. From these lines it next visited those of the 1st regiment of cavalry; then those of Captain Gillman's Levy; and lastly, those of the 12th regiment of Native infantry, a mile nearer the town. In the whole extent of this line, the ground gradually ascends from the river. In Alligur, the jails, cantonments, and adjoining villages

continued healthy, whilst the disease pervaded the crowded and filthy bazars of Coel. The populous and close lanes of Delhi suffered more than the rectangular and spacious streets of Jeypore; and the low and nasty town of Saharunpore more than the city and cantonments of Meerut. The military lines of Saharunpore had not a case, when the inhabitants of the town were very sickly. In the three grounds of encampment of the centre division of the army in which the disease prevailed most, Terayt, Talgong, and Silya, the soil was low and moist; the water foul, stagnant, and of bad, brackish quality; and every where not more than two or three feet from the surface of the earth; and the vicinity abounded in animal and vegetable putrified matter.—Whereas at Erich, where the army regained its health, the situation was high and salubrious, and the water clear and pure from a running stream. In the encampment of the Rajpootana force, on one side of the line in which the tents were pitched higher, and consequently drier than in the other, the disease was less sensibly felt.—*Beng. Rep.* 113, 117.

But although such was unquestionably the general rule, there were occasionally marked exceptions; there were even whole districts, as Cawnpore and Juanpore, in which all parts, without reference to their being high or low, dry or damp, appeared to be alike affected. In others again, though the epidemic affected particular lines and villages, its liking for these parts was not to be explained on the supposition of greater general insalubrity than that of the spots which it did not visit. Lastly, there were even instances of its showing a preference for places usually dry and wholesome, over damp and

agueish situations. The lines of the Native artillery, lying in the low and swampy suburbs of Allahabad, were spared ; while those of the European invalids, which stood high and dry, were largely infected. The disease attacked the Nagpore force when encamped on high ground, in a fine dry country, with neither jungles nor hills for many miles round.—In like manner, there was no jungle or marsh in the vicinity of Hansi,—and the whole country through which the troops marched, during the prevalence of the epidemic, was open and elevated. But these exceptions were comparatively few in number, and should not be allowed to affect the general conclusion founded on the large body of affirmative evidence previously adduced.—*Beng. Rep.* 118—120. If these exceptions, however, had been still more numerous ; or if the general rule had been reversed, and the places usually most healthy had been the most frequently affected, the conclusion against the existence of a specific contagion would not be in the smallest degree shaken. From the entire immunity for the most part of lofty and mountainous situations, it is probable from the relative state of the inhabitants, in respect to predisposition to disease, that a much greater sum of the efficient cause is required in such situations to produce actual sickness. It appeared to be with difficulty that the cause of the epidemic got over the high chain which divides Nypaul from Tirhoot, and Munnipore from Sylhet : and the elevated fortresses of Rhotas, Adjeegur, and Kallinjur ; of the Dhoon, and the hilly parts of Rajpootana enjoyed a perfect immunity, while all around them was infected. Whilst the villages situated near the woody base of Rhotas mountain were suffering dreadfully, the only

man residing near the top of the hill who was affected, was one who went down and caught the disease in the plain.—121, 122.

Respecting the description of persons whom this epidemic principally affected, or principally spared, the case is equally clear. In Calcutta “the higher class of natives, and Europeans generally, suffered proportionably less than the lower ranks.”—*Beng. Rep.* p. 110, 111. “In Benares the disease was chiefly confined to the lower classes of Natives living in wretched huts.”—p. 114. The Bombay Report, pref. p. xxxi, says, “It appears that a much smaller proportion of the higher orders of society have suffered from it on this side of India, than in the Bengal provinces; and in this Island the disease has been confined *almost exclusively to that class who are most exposed to the severest labour and privation.*” Mr. Whyte says, “The class of people, which has principally suffered from this disease, is composed of the poor, badly clothed or fed, and those of a debilitated constitution, &c.”—*Bom. Rep.* p. 12. Dr. Taylor, from the most ample experience, says, “Those who have suffered most severely in Bombay are the very poorest classes, who live on meagre food, undergo considerable fatigue, inhabit wretched huts, and who often, not possessed even of a cot, are obliged to sleep on the mud floor with scarcely a cloth to spread underneath them.”—*Bom. Rep.* p. 195, 196. Mr. Ogilvy says, “The epidemic has been here chiefly confined to the Natives, very few Europeans having been attacked by it, and of these the higher orders seem to have been almost entirely exempted.”—*Bom. Rep.* p. 199. This is indeed, in modern times, the invariable course of all epi-

mics, which no one pretends to deny; although we are told by Fracastorius, it used to be different some hundred years ago, when pestilences had a particular redilection for persons of high quality.

The disease invariably ran a regular course of increase, maturity, diminution, and cessation, and that generally in a period somewhat less than a month. "Thus, in the centre division of the army, it began on the 7th of November, was at the height from the 16th to the 22nd, declined to the end of the month, and finally disappeared about the 2nd or 3rd of December: so in the left division of the army, it commenced on the 10th of April, was at its full in the middle of the month, declined from the 21st, and died away before the beginning of May. The case of the Nagpore force is somewhat different: without passing through the usual period of increase, it immediately had the disorder in its most violent form; the period of the revolution was proportionably shorter; the disorder which began on the 31st of May, had abated previously to the 5th of June, and nearly disappeared soon after the 18th. In the Rajpootana force, the sickly period was still shorter: the disease appeared on the 14th of September, and continued violent to the 20th; after which it gradually declined till the 1st of October, when it wholly disappeared. Lastly, in the Hansi division, it observed the same regularity of course, beginning on the 6th of August, increasing in severity for a time, and becoming gradually extinct towards the end of the month."—*Beng. Rep.* pp. 126, 127. "Neither the strong contrary monsoon winds then prevailing," says Mr. Ogilvy, "nor the insular situation of Bombay itself, appear to have had any influ-

ence in exempting it from the attack of this singular disorder, which, advancing from the eastward, made its appearance on this island about the middle of August, and soon spread with astonishing rapidity from one end of it to the other. It appears to have attained its height about the end of that month or beginning of September, when 300 or 400 cases occurred daily; after which it began to decline, *at first rapidly*, and subsequently it has continued to exist *in a varying though much diminished degree.*"—*Bom. Rep.* pp. 198, 199. Would a disease, which depended upon contagion, have rapidly diminished, under the most perfect freedom of intercourse, when 300 or 400 new cases were occurring daily, and the contagious surface had become prodigiously extended? It can scarcely be necessary to observe how utterly incompatible these facts are with the existence of a specific *virus*, as the cause of this disease; or that each of these cases of itself affords decisive proof of the non-existence of such an agent.

The fluctuations of the disease, as described by Dr. Taylor (*Bom. Rep.* p. 173), and by Mr. Ogilvy (p. 199); the alternately rapid increase and decrease of the number of the sick, under the most unrestrained intercourse; together with the very great diversity of its symptoms, both on the side of Bombay and Bengal, are in further evidence of the same conclusion.

The facts relating to cholera morbus, as it appeared in Arabia, Syria, and other countries of the east, which are to be found in the Correspondence of Mr. Barker inserted in the Appendix, exactly agree with those contained in the Reports of the Bengal and Bombay Medical Boards. In the course from east to west, or

from south-east to north-west, generally observed by those epidemics in their progress, as well as by that of Barcelona in 1823, there is a remarkable coincidence ; which, were there no other, would alone be decisive proof of the non-existence of contagion as their cause. By an officer of the Madras Medical Department, Dr. Conwell, I have been assured, that whilst the believers in pestilential contagion, upon the establishment of that Presidency, form but a very small minority, the French professional authorities of Pondicherry, where the disease remained but a few days, were unanimously in favour of the doctrine. The reasons of this, as connected with fanaticism and policy, are to be collected from several parts of this volume. Had India been under the jurisdiction of the French, instead of the English, at the period of the late pestilence, sanitary laws would assuredly have been extended throughout the extensive regions of the Company's territories ; and confusion, despotism and mortality would have been multiplied tenfold. But with the East India Company, fortunately for a hundred millions of the inhabitants of India, neither fanaticism, political expediency, or the prejudices of the natives, any more than their own merits, operated as recommendations in favour of those establishments.

APPENDIX.

Extracts of Letters from John Barker, Esq. Consul in Syria, to the Levant Company, on the Subject of Cholera Morbus.

No. I.

Aleppo, May 9, 1823.

“**DURING** the month following the 13th of August (1822, the day of the destructive earthquake), that extremely painful and dangerous disease, the ophthalmia, was so prevalent throughout the district to which the earthquake extended, that I can venture to affirm not more than three persons in ten escaped ! Of nine persons which composed my family, five were sufferers from that cruel disorder. Of the survivors of the Jews of Aleppo (not more than 2,400), 74 lost their sight ! And although the number of the Turks and Christians here, who became blind immediately after their providential escape from the earthquake, cannot be exactly ascertained, I can safely state it to be more than 1500 ! The people of Antiochia and the neighbouring villages, were as much afflicted with ophthalmia as those of Aleppo ; but I did not hear of one person having lost his sight in consequence of it : and this extraordinary difference in the effects of the same disease can, I think, be attributed only to the impro-

per applications used by the surgeons of this place ; because the Antiochians had the good fortune to be deprived of all manner of chirurgical assistance.— [This difference was more probably owing to a difference of degree in the malady, it being, it is to be presumed, more severe in Aleppo than in Antiochia, in proportion to the greater severity of the earthquake.] —I am happy to say that six weeks have elapsed without an earthquake strong enough to be generally felt.”

No. II.

Antiochia, June 30, 1823.

“I am concerned to say that a few accidents of the plague broke out at Bairut on the 1st inst., on board an English ship, and two other European vessels from Egypt ; *but as the summer was so far advanced, it was hoped it would not spread.* It is also with extreme regret I have still to announce the continuance of the earthquakes ; scarcely a day passes without a shock being perceptible. On the 4th, 7th, 15th, 17th and 24th inst., they were strong enough to create some alarm. The year has not evolved ere Syria has experienced another phænomenon still more uncommon than the earthquake. In a Natural History of this country it would be stated, that it is plentifully supplied with rain during the months of December and March ; that April sometimes affords most genial and inestimable showers ; and that by the middle of May they cease almost entirely till October. From the 12th to the 15th of the present month of June, it rained in most parts of the province : but between Tortosa and Tripoli, it deluged the low grounds ; and

the floods, descending from the mountains with impetuous and unexpected violence, carried every thing before them, and swept into the sea the reaped and standing crops, the mulberry trees, the houses and the people, of whom it is said a thousand perished. That number is, no doubt, exaggerated."

No. III.

"It is the will of God that I should be destined to consign to Your Worships' archives, in my correspondence, the most afflicting details of uncommon and dreadful visitations. I humbly hope my character will secure me from the imputation of exaggerating the evils I am called upon to describe. If any should entertain doubts on that point, let my Reports be compared with those given by the Consuls of other nations in Syria. Our position will surely deserve some commiseration, when I aver that I heard many yesterday exclaim—'Gracious God! the earthquake is nothing to this! The plague, even the plague, would now be a boon, instead of the cholera morbus!' I cannot give an adequate idea of the horror-stricken scenes that I witnessed yesterday, when it was vociferated that five persons had been victims of that terrific disorder within the last twenty-four hours. Among the Europeans, the consternation, from the magnitude and suddenness of the peril, was such, that most appeared to have lost the full use of their faculties. The men, pale and trembling, flew hastily to tie up bundles of their most important papers; the women, on their knees, were stuffing trunks and boxes; and the servants running to and fro without much furthering

the necessary preparations for the immediate departure of the families. As this novel pestilence is not supposed to be propagated by the touch, but to float in the vital element we inhale, all those who had horses and mules, or could procure them, determined to fly. But it was no trivial undertaking to perform a journey of ten or fifteen days in this hot season, with women and children, exposed to the imminent danger of falling sick from fatigue and privation, and the intolerable rays of the sun in the day, and in the night to be deprived of rest by the dread of being suddenly attacked and robbed or murdered ; to which we should be always exposed, because the fear of the cholera morbus would compel us to encamp without the walls of the towns that lay in our road. It appeared to us that no town nearer than Gurum in Armenia could afford us a present asylum. But on a sober view of all the complicated evils to be endured before we could reach a place of safety, almost all the Europeans abandoned the project of flight. If our houses had not been ruined, we should have derived infinite consolation from the idea, that the same measures of seclusion which had in times of plague saved us from that contagion, would prove efficacious now against the cholera morbus ; which, although thought not to be infectious, is not proved to be so. But as the earthquakes continue, we are still confined to our wooden huts ; in which it is impossible to carry on the usual quarantine regulations with full effect ; and if it were possible, they are so confined and so hot in this season, that to be shut up in them for a length of time would be as great an evil as that we wish to avoid. In the mean time, two medical gentlemen and others, who

had been commissioned to verify the reported cases of the cholera morbus, have in some degree relieved us from the immediate dread of *the presence of the disorder in the city. Three of the cases are proved to be unfounded, and one or two only doubtful.*"

No. IV.

Aleppo, July 16, 1823.

"In the summer and autumn of 1821, the cholera morbus broke out nearly at the same time at Muscat, Bushire, and Bassora. Having for five years previously ravaged many parts of India (whence it is said to have spread to China, Siam, and the island of Java), *it was reasonably supposed to have been imported into the Persian Gulf with the merchandize of Hindostan.* That conjecture is rendered still more probable, by its being an unknown disorder in this part of the world. Yet, since the fatal distemper has spread in Arabia, the people seem to have forgot its origin, and agree in regarding it as purely epidemical; as not to be caught by contact with effects impregnated by miasma of the sick, or by a diseased body itself. From some phænomena in its propagation to distant points at the same instant, and its sudden cessation, they have given it the name of '*El Hawa*,' the wind, or pestilential blast. It is said to have carried off 18,000 people at Bassora in eleven days! Its effects were equally deplorable in Muscat, El Bahrein, and its vicinity; where it is supposed to have swept away, in a short space of time, 10,000 persons; but we have not learnt how far it spread into the desert of Nedged from that point. From Bushire it passed on to Shiraz, where it is reported to have destroyed 5000

people ; and, before the cold weather could put a stop to its progress, had time to advance almost to Ispahan. This terminated its first campaign in Persia ; in which fell one of its most distinguished victims, the Honourable the East India Company's Resident at Bagdad, Claudius James Rich, Esq., a name that will long be remembered here with the liveliest emotions of sorrow and respect. He retired to rest at Shiraz but very slightly indisposed, and in the morning was found dead in his bed. In Arabia, in the same season, the summer of 1821, it travelled northerly from Bassora to Bagdad. It reached that place the end of August, stayed a month, and is stated to have carried off a thousand persons. I believe it did not spread in that season in the neighbourhood of Bagdad. In July of the following year 1822, it broke out at Mousul, where, with a very few days variation, it passed that month, August, at Mudin ; September, at Diarbekir ; October, at Orfa ; and November at Biri, Antab, and Aleppo, which three last places it visited at the same time : but the cold season being at hand, it ceased in all the beginning of December. It is stated to have carried off at Mousul 500, Mudin 600, Diarbekir only 50, Orfa 400, Biri 500 although not containing one-fourth of the population of Orfa. Antab suffered little, and at Aleppo its ravages were remarkable during only three days, carrying off from 100 to 150 persons each day ; and in all 4 to 500. Here terminated, about the 5th or 10th of December, the second period of its progress *in a westerly direction*, and on the high road from Bagdad to Aleppo. In the course of the last summer, that is, during the same period, it travelled from Mousul to this place ;

it broke out at Ispahan, spread to Tahiran, and over a great part of Persia ; and from Bagdad into Curdistan ; and, what would be the most deplorable of events if confirmed, is said to have returned to Shiraz, and other places in Persia, which it had visited the preceding summer of 1821. This fact is to us of incalculable importance, for it would destroy the hopes we entertain of its not having made a retrograde movement in its course from Bassora to Aleppo ; and thus deserve the name it has acquired of ‘ the *passing* evil blast.’ In support of those hopes we have the full experience of one year. It did *not* return to Bagdad, Bassora, El Bahrein, or Muscat, in the summer of 1822 : and although it has now been raging more than a month in all the towns and villages in the populous district extending from Antiochia to Tortosa, opposite the little island of Roâd, we have reason to believe that it has not reappeared this summer in any of the towns in Mesopotamia, through which it passed last summer, and stopped at Aleppo and Antab. It is on the fact that it broke out at Mousul last summer, and travelled this way without retrograding to its source, Bagdad, that we found all our hopes of being this year exempted from the contagion. Aleppo is this year, and at this moment, *vis-à-vis* Antiochia, and Latachia in exactly the predicament in which Bagdad was last year relatively to Mousul. It broke out at the latter place last year as soon as the warm season came on, when Fahrenheit’s thermometer rose to 63 degrees, and continued to advance *in a westerly direction*, lying dormant at Bagdad. This year it broke out about the 10th of June in the villages of Latachia, and about the 20th of June in Antiochia,

corresponding to the difference of the heat of those climates; and is, we hope, now dormant and paralysed in Aleppo. If further experience should confirm this phænomenon of its progress, it will resemble, in its peculiar mode of advance, its near relative the plague, when it has to carry its devastation from south to north. The plague, for instance, breaks out at Damascus this spring; in the course of the summer, thousands fly and take refuge in Aleppo. They do not communicate the contagion here, but they scatter, like the locusts, the seeds of it in the city; and the following year, when the proper season arrives for its development, it *infallibly* germinates, and proceeds towards the north, infecting in the same summer the neighbouring towns of Killis and Antab, and only depositing the seeds of the contagion in the more distant towns of Armenia, to be depopulated in their turn, when the pestilence has ceased in the places from which it was derived. It continues to advance by similar stages to Constantinople, and thence to the frontiers of Germany, where a happy experience has taught the means of arresting its further progress, and preventing its introduction into civilized Europe.

I have not yet spoken of the symptoms of the cholera morbus. I can speak with confidence on that point, having witnessed its effects in several cases. At Antiochia, as I have heard happened last year at Aleppo and other places, it began very slowly, one or two persons being attacked in a day, for some days, and in such a way as not to be easily distinguishable from the common fevers of the country; which invariably commence by violent and repeated retchings. There is, however, an essential difference, which escapes a

careless observer. The cholera morbus gives us warning by previous indisposition, loss of appetite, debility, &c. It attacks suddenly a man in the highest state of health. The vomitings of fever are without pain ; whereas those of cholera morbus are always attended with the most acute pain in the stomach, and the retchings are always accompanied by a liquid involuntary discharge from the bowels, of which the patient seems to be hardly conscious. On the 6th inst., while I was at Suedia, between Antiochia and Latachia, a report prevailed of one or two doubtful cases of cholera morbus. On the 7th and 8th, nothing more occurred. On the 9th, precisely at twelve o'clock, two of my workmen were attacked ; and at the same instant, nearly 20 fine robust men, in the prime of life, who were ploughing or reaping in the fields, were laid prostrate as if they had been shot through the heart. The only word they all uttered was '*Kulby! Kulby!*' meaning to describe excruciating spasms in the stomach, when an instant's remission of vomiting would allow them utterance. The retchings, their agony, and the flux, continued for two or three hours, when exhausted nature gave up the contest. They remained from that time insensible and prostrate. Most of them died soon after the setting sun ; and none survived long enough to see it rise again. It is said that in the vicinity of Latachia and at Antiochia, in some cases death ensued within two hours after the vomiting commenced. The thermometer on the 9th, and for ten days previously, had not exceeded at noon 63 degrees of Fahrenheit, with a light westerly wind blowing day and night on Antiochia. I made of course a precipitate retreat on the 10th. I crossed

the Orontes at a ford, to avoid passing through Antiochia on my way to Aleppo ; where, by God's mercy, I and my domestics arrived in health on the 12th. I have since heard that the pestilence had been diffused with inconceivable velocity over many villages that lie between Antiochia and the sea ; and as several are situated on the summit of high mountains, this distemper is not similar in all respects to the yellow fever, which I understand does not extend to elevated situations. It is, however, similar in this, that all its victims are adults, and more frequently males than females. When we heard two years ago of the dreadful, although doubtless exaggerated, accounts of the havoc cholera morbus was making in the Persian Gulf, we little thought how soon we were destined to witness its horrors. Why did we not foresee that this calamity would await us ? If Your Worships should agree with me in thinking that the cholera morbus will carry desolation and death before it till it arrives at the confines of Europe, you will not be taken un-awares as we have been ; but perhaps resolve to promote, with your usual philanthropy and generosity, a subscription for an *English physician* to be sent out for the important purpose of meeting half-way, and of observing, the nature and the motions of this new formidable enemy of human life."

No. V.

Aleppo, July 20, 1823.

"Four more days have elapsed without any accidents of the cholera morbus in Aleppo, and in the line of towns in Mesopotamia, through which it passed

last year, having come to my knowledge. In my next I shall render you the most exact and circumstantial account I can procure of its progress on the coast. It is now said that it has taken a north-westerly direction to Beylan, on the high road to Caramania; but that important fact cannot yet be depended upon. In the mean time, the almost daily influx of caravans and travellers from the coast, keeps us in constant alarm and the most cruel state of anxiety; from which we cannot be entirely relieved but by the approach of winter—a season full four months in the womb of time. We are still suffering from the continuance of the earthquakes. Scarcely a day elapses without one or more slight shocks being felt. On the 24th ult., a violent one was felt at Scanderoon, and one equally alarming at Latachia on the 16th instant. Three shocks also happened in one night at Bagdad about the 1st of June. At the time—at the very moment perhaps—that Englishmen were assembling for the noble purpose of sending relief to the Grand Seignor's subjects in Syria, the Porte was occupied in issuing orders for sending--a *Hogiaghan*--an officer for securing the effects of such as might have died without leaving an heir to their estates; and while my countrymen were tasting the pure delight that always accompanies the performance of a generous action, the Porte was probably exulting in the fine prospect which was opened to their cupidity, by a fortunate and rare occurrence in the bills of mortality! This officer is still here in the exercise of his dignified functions, digging out of the ruins rotten carpets and quilts, broken china ware, and the more valuable articles of copper kitchen utensils; and has been often heard to

say, that *the result of his labours has fallen very much short of his and of his employer's expectations.* 'It was reported,' said he, 'that twenty thousand persons had perished in Aleppo. Why, there is nobody dead!'

No. VI.

Aleppo, September 4, 1823.

"A week does not elapse in which one or two slight shocks do not occur to keep alive the recollection of our misfortunes. Two or three smarter shocks have been felt in Antiochia and Armenia. In regard to the cholera morbus, although 45 days have elapsed since my last Report on that important subject, I have not much fresh intelligence to communicate. The phænomenon of this species of cholera not breaking out with the return of the warm season at the places which it visited the preceding summer, becomes daily more and more certain, as Aleppo and the towns in Mesopotamia, through which it passed last year, continue to be free from it. And its other singular propensity of never staying longer than a month at any of its *stations*, and never breaking out at a new place until it has finished its work of death at the preceding stage of its progress, is fully confirmed by its mode of advance, since it spread in three branches from Antiochia and Latachia; where, it will be recollected, it manifested itself nearly at the same time, as soon as the temperature of the air made the thermometer rise to 63° of Fahrenheit, and where, there can be no doubt, the *germ* of this new disorder in Syria had lain dormant during the winter, in which season

it had been carried to Antiochia and Latachia, from Aleppo : after raging a very little more than thirty days at these places and in their immediate vicinity, it ceased there, and from the first advanced to Hankaramott and Beylan, its second stage ; and in that branch of its progress on the post road to Constantinople, is now stationary at Scanderoon. From Latachia (its first station) it passed on to Tortosa, where its month of devastation being terminated, we are in daily expectation of hearing of its having broken out in Tripoli. After finishing at Latachia, it took also an easterly direction, and broke out at Gisser Shogr, on the Orontes, at the same time that it appeared at Tortosa, on the coast opposite to the little island of Roâd. It stayed the usual term of a month at Gisser Shogr, and going further up the Orontes, broke out at Hamah. It also terminated there in the same term ; and it is now reported that Ham, a large town 12 leagues higher up the river, is its present station—the caravan road to Damascus. The character of the distemper is exactly as I represented it to have been at Suedia. In a letter of Mons. Hypolite Martin, general agent for all nations at Scanderoon, dated the 25th of August, it is thus described : ‘ Last week two Arabs encamped a quarter of an hour off this place, died in a few hours with no other symptoms than retchings and evacuations by stool. The 22d and 25th inst., we had here two accidents, a man and a woman, both carried off in the same way, and with the same symptoms.’ Although from the commencement to the end of the *contagion*, a month is the usual term of the existence of the disease in one place, it is not active more than a third or half of that time. As far as I have been

able to form an opinion of the probable number of the deaths at the places which it has hitherto visited this summer in Syria, it appears no where to have carried off a tenth of the population, and almost all adults; which is infinitely less than the mortality the same disorder produced at Bussora, and the yellow fever at Barcelona, in 1821."

No. VII.

October 1, 1823.

"In my last Report on the *cholera morbus*, Your Worships will have perceived, That the pestilence had spread in three branches, from Antiochia and Latachia, after terminating in those places, and their neighbouring villages, in about the usual term of the *contagious* visitation of one month. That in the branch leading to Constantinople it had made three successive steps or resting places; 1. Antiochia, 2. Hankaramott and Beylan, 3. Scanderoon. That in its progress from Latachia, on the high road to Damascus, it had also advanced three stages; 1. Latachia, 2. Gisser Shorgr, 3. Hamah. And that in the other branch leading to Egypt, it had only proceeded two stages; namely, 1. Latachia, 2. Tortosa. I am now briefly to say, that letters of the 13th ult. from Tripoli have assured us of the disorder not having, up to that period, made any approaches from Tortosa to that town; and as more than double the usual time had elapsed after its ceasing at Tortosa, hopes may now be entertained that in that branch it has become extinct. From Hamah it struck out in a direct

easterly course, across a perfect desert of three days journey, to a town of about 600 families of sedentary Arabs, called Sukney, where it is said to be committing dreadful havoc ; and from whence it again took a southerly direction to Palmyra ten leagues off Sukney. Reports have some time prevailed of the distemper having made a fourth remove from Scanderoon to Adana ; but notwithstanding my utmost exertions to ascertain the truth or falsehood of these rumours, I have not been able to decide the important question of the contagion having broken out in Caramania. In regard to the earthquakes, we begin, like the inhabitants of Chili, to be so accustomed to them that their daily occurrence excites very little attention.

PS. Since writing the above, I have obtained certain intelligence, that the cholera morbus destroyed, in 15 or 20 days, 180 persons in a village containing only 400. It is called Salkein, and is situated on a rising ground, three miles from the Orontes near Dareaush. I notice this fact, because it forms an exception to my estimation of the cholera morbus not having any where carried off in Syria a tenth part of the population."

No. VIII.

Aleppo, October 23, 1823.

" By my preceding dispatch of the 1st instant, I informed Your Worships of the progress of the cholera morbus in Syria. It was then doubtful whether the pestilence had obtained a footing in Caramania. I am now happy to say that nothing has come to my knowledge to confirm the report of its being at Adana

and Marash, but I cannot assert that it has not reached those places. We are now in possession of the most ample intelligence of the malady's progress in a southerly direction. At Hamah, in a population of 12 or 15 thousand, it carried off nearly 1000 in the usual term of 30 or 40 days. At its next stage, Hums, a town of equal extent, ten leagues distant, on the Damascus road, it is said hardly ten people died of the disease. The usual term of its visitation being over, it manifested itself at Damascus the end of August, without having left the infection at five or six villages on the road. The distemper began among the Turks, and the few who fell victims to it died in its commencement. It being afterwards remarked that those recovered who were let blood copiously the instant they were attacked, the practice was generally adopted; and although not one in ten of the adults of a population of one hundred thousand souls escaped the infection, scarcely one in 200 or 300 cases ended fatally. It is thought that at Hamah and Hums, and generally at other places, more than half the patients died. The anomaly shown by the cholera morbus, in an almost universal infection, and so extremely diminished mortality, is variously accounted for. By some these peculiarities are attributed to the virulence of the disease having abated, as it were *spent its force* in the course of its progress from the Persian Gulf to the Mediterranean. Others are of opinion that an effectual remedy has been discovered in immediate copious blood-letting; and that no diminution in the malignity of the disorder has taken place. They say, How can it be supposed the disease has become less malignant, when its contagion, its power of propaga-

tion, has increased ten-fold? And they support the argument by asserting, that in the first attack of the disorder the patient was as violently convulsed by continual retchings at Damascus as elsewhere, and during the first day of his sickness as often deprived of all sensation; that on the morning of the second day he generally got up; and in the course of 8 or 10 days gradually recovered his usual strength, without the aid of medicine or any particular regimen. Another anomaly the disorder exhibited at Damascus is, that in many cases red petechiæ appeared, and in most the diarrhœa was not one of its symptoms."

No. IX.

Aleppo, January 28, 1824.

"Cholera morbus broke out in the beginning of December, nearly at the same time, in Nazareth, Saffat, and Taberia; but the season being far advanced, it did not carry off many persons. Abdulla, Pacha of Acri, as soon as he was informed of its being at those places, cut off all communication between them and Acri; but the non-communication was not of long duration, as the cold weather in the end of December put a stop to the contagion. He likewise sent a German physician to Nazareth, who fell a victim to the distemper three days after he arrived there. I still entertain the opinion, that it is extremely probable this dreadful disorder will break out in the spring in Jerusalem, and travel during the ensuing summer into Egypt. I apprehend also, although we have not had very correct accounts of the progress it made

northward, that that branch of its advance into Asia Minor is not dried up; and that the cholera morbus will be heard of in June next in Caraman. Slight shocks of earthquakes are still felt from time to time in this pashalic, particularly in the vicinity of Antiochia; where one shock a fortnight ago was so strong as to create considerable alarm, but did no damage."

THE END.

The first chapter of the book is devoted to a general introduction to the subject of the book. It discusses the importance of the subject and the scope of the book. It also discusses the organization of the book and the notation used throughout.

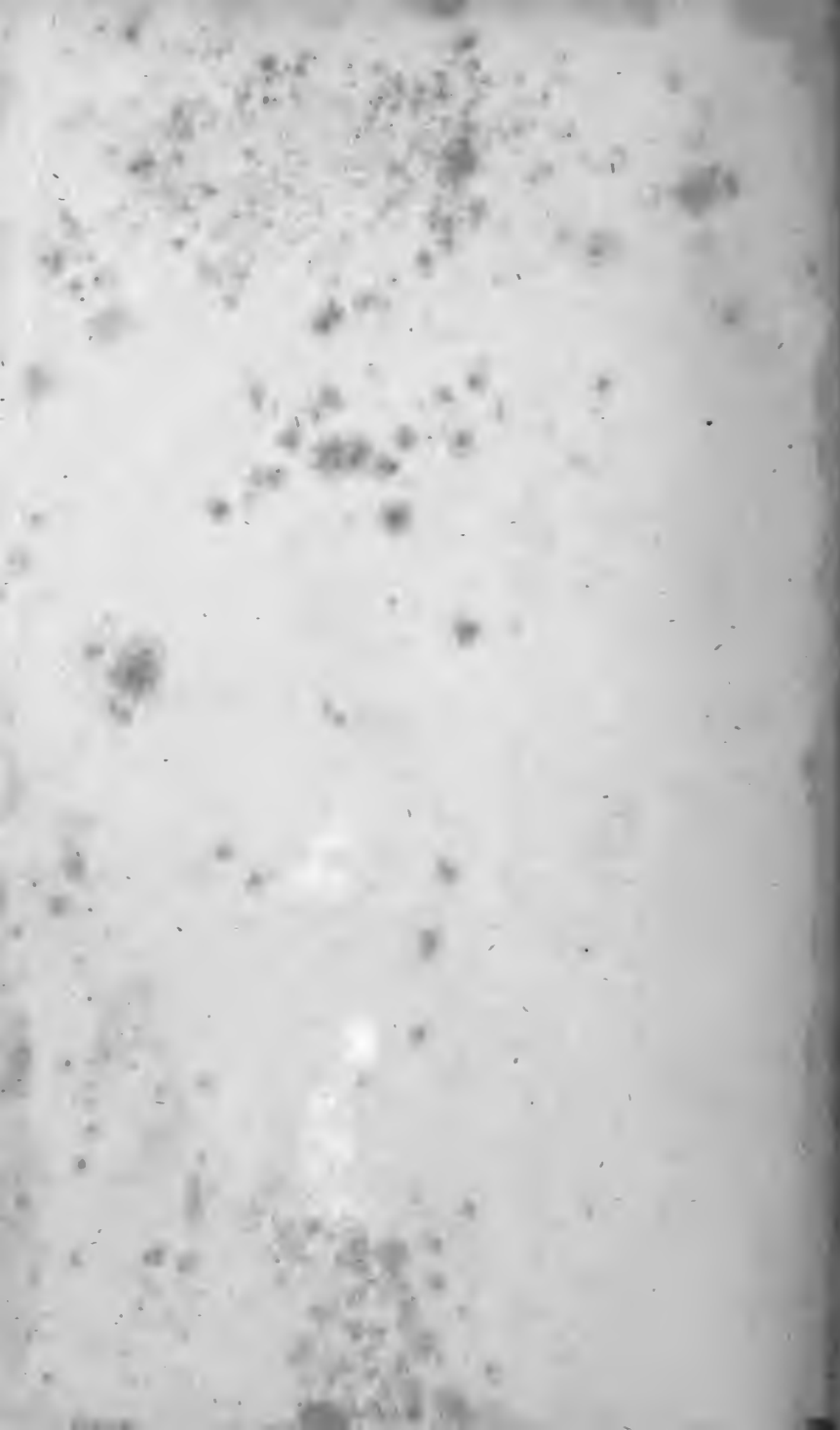
The second chapter is devoted to the study of the properties of the functions which are the subject of the book. It discusses the basic properties of these functions and the methods for their study.

CHAPTER 2

The third chapter is devoted to the study of the properties of the functions which are the subject of the book. It discusses the basic properties of these functions and the methods for their study.

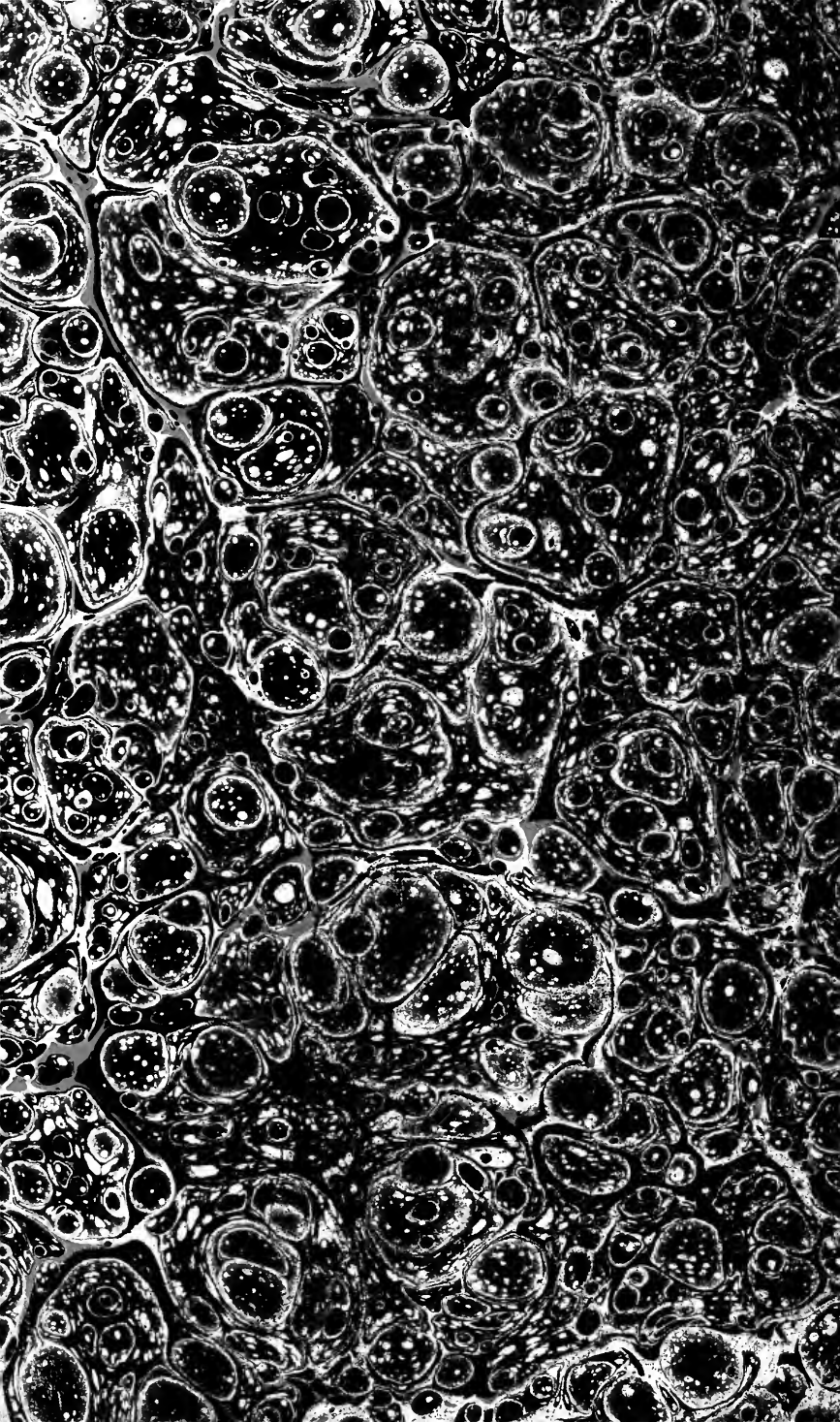
The fourth chapter is devoted to the study of the properties of the functions which are the subject of the book. It discusses the basic properties of these functions and the methods for their study.

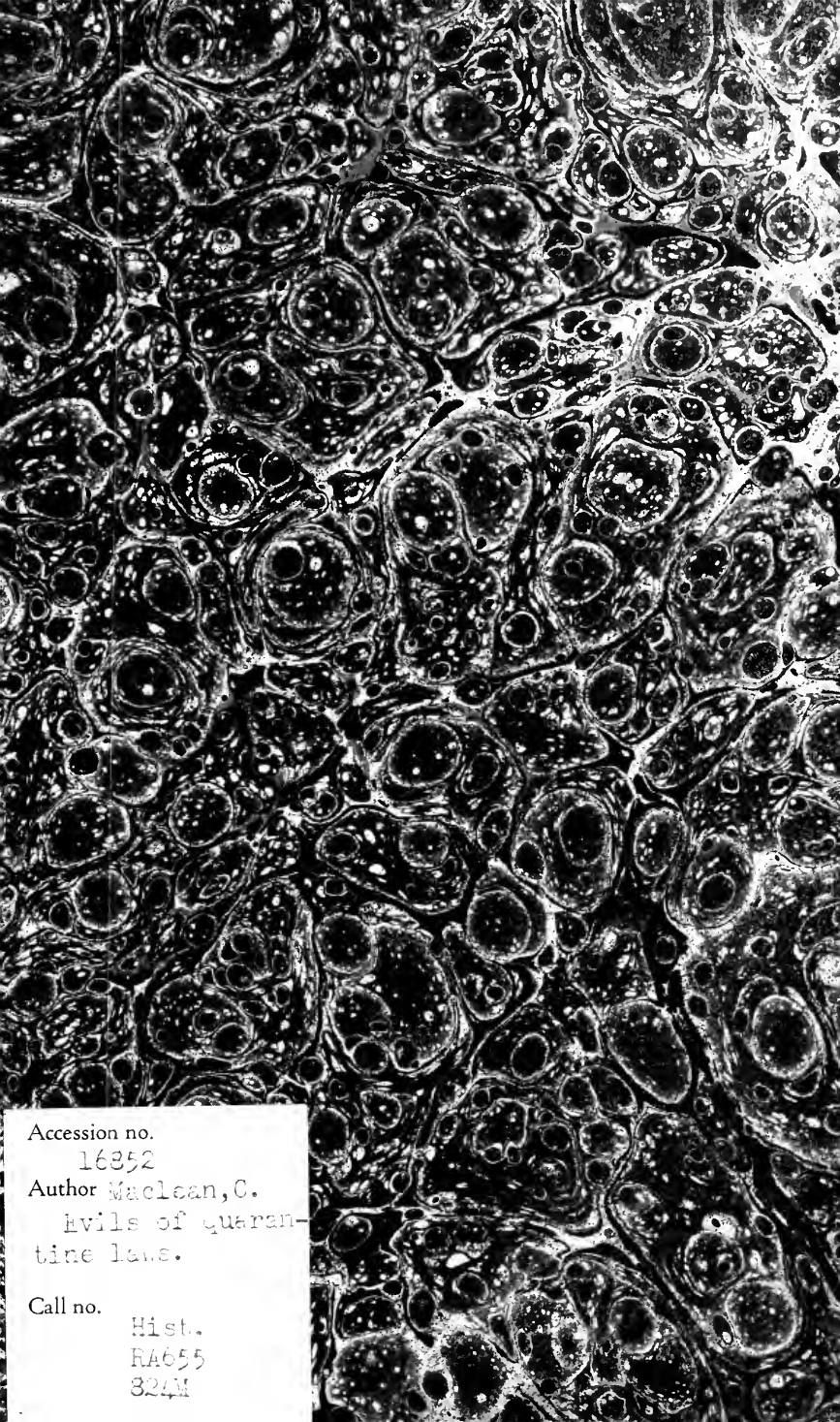
The fifth chapter is devoted to the study of the properties of the functions which are the subject of the book. It discusses the basic properties of these functions and the methods for their study.





16852





Accession no.

16352

Author Maclean, C.

Evils of quaran-
tine laws.

Call no.

Hist.

RA655

324M

